# MUSICIANS' WELLBEING: A CROSS-SECTIONAL INVESTIGATION WITHIN THE FRAMEWORK OF POSITIVE PSYCHOLOGY

Sara Garcia Ascenso

Thesis submitted in fulfilment of the degree of Doctor of Philosophy

> Royal College of Music, London December 2021

## ABSTRACT

The World Health Organization has for decades highlighted how health is more than the absence of disorder, a proposal largely expanded by Positive Psychology. Doing justice to this appeal means that both the presence of positive indicators of functioning and the absence of illbeing are important when investigating wellbeing. Research among musicians is still to reflect this balance. This thesis broadens our outlook beyond the stresses and strains of the music profession that have populated the research base, through investigating positive indicators of functioning, alongside illbeing, with an international sample of musicians within the classical music sector, through three studies.

The first study generated a profile of musicians' psychological functioning through the lens of a multidimensional model of *positive mental health*, encompassing both hedonic and eudaimonic wellbeing. 1014 musicians (788 professionals and 226 students) answered the *Mental Health Continuum–Long Form* and the *Satisfaction with Life Scale*. Results evidenced a very favourable profile. Musicians scored moderately or highly across all components of wellbeing. There was also a higher proportion of musicians *flourishing* (experiencing optimal mental health) when compared with published indicators from general population and musicians' scores were not different from those of a group of 130 dancers and 83 actors recruited for the current study. Demographic trends were broadly in line with previous research with other groups, although a striking exception were two gold-standard dimensions of wellbeing: *Personal growth* and *Purpose in life*. Contrary to previous research showing a decline with age for both among general population, musicians showed very high scores, very early on, which remained high for all age groups across the life-span.

The second study drew a profile of musicians' mental illbeing, through an assessment of non-specific psychological distress, a strong predictor of serious mental illness. 982 musicians (760 professionals and 222 students) answered the *Kessler Scale of Psychological Distress.* The large majority of musicians (64.4%) classified for no psychological distress, and the 23.9% who scored high enough for moderate levels, were mostly borderline to no distress. No significant differences in levels of distress were found across groups representing different types of musical activity. Professionals

showed a more favorable profile than students in the proportion classifying for clinicallysignificant distress (10% versus 17.6%).

When comparing professional musicians' distress scores with published indicators from other occupations, musicians scored lower than all: doctors, miners, nurses, army, and taxi drivers. Students' rates were generally comparable or higher than other student samples. Musicians' scores were not different to those of dancers (n = 121) and actors (n = 81) recruited for comparison.

After obtaining a profile of musicians' wellbeing *and* illbeing, Study 2 investigated how the two relate, adopting the framework of the *Dual continua model* of mental health. Mental health and illness were considered as two co-existing continua of functioning rather than opposite ends of the same continuum. Results confirmed the theoretical expectations of the model: there were only weak to moderate negative correlations between mental health and mental illness. Of the group of musicians reporting levels of psychological distress high enough to qualify for severe mental illness, 36% were *simultaneously* experiencing either high or moderate levels of mental health. The absence of mental illness does not equal the presence of mental health and vice-versa.

The third study addressed questions left unanswered in earlier investigations where Positive Psychology was used as a framework for musicians' wellbeing assessment. It clarified the profile of high meaning among musicians reported in previous research, examining the specific role of work-related meaning. 943 musicians (professionals and students) answered the *Meaning in Life Questionnaire* and 707 professional musicians answered the *Work and Meaning Inventory*. Musicians scored high in presence of meaning in life, meaningful work and also in *search* for meaning. Musicians' level of presence of meaning was almost independent of their search for meaning. Despite finding meaning, musicians continue to actively pursue it. This search was positively associated with life satisfaction and negatively associated with psychological distress. Results also showed that having meaning in work protects musicians from the negative impact of psychological distress on global life meaning.

When wellbeing is assessed as the presence of positive indicators of functioning musicians show favourable profiles and crucially, the integration of health and illness indicators brings new insight into musicians' wellbeing. The results of this thesis carry implications for both the assessment and promotion of wellbeing among musicians. As we continue to further our understanding of how to enable a healthy music sector, Positive Psychology brings an innovative and valuable approach.

## **ACKNOWLEDGEMENTS**

I was able to carry out the research presented in this thesis because of the support of a large group of people that I would like to acknowledge.

First, my deepest gratitude to all the participants of this study, for their generosity. I was overwhelmed by the encouragement I received from across the world. Thanks also to the many institutions and individuals who facilitated the recruitment process.

I thank my supervisory team, Prof. Aaron Williamon, Prof. Rosie Perkins and Prof. Antonella Delle Fave, for their support and guidance. Thanks also to Prof. Natasha Loges for her encouragement. A special thanks to Dr. Renata Medeiros-Mirra for her advice on data analysis.

I have been blessed with a large number of excellent colleagues throughout the years of work at the Royal College of Music, King's College London, the University of Lisbon, Trinity Laban and the Royal Northern College of Music. They were all very important in my PhD journey in different ways. To all, a big thank you!

I would also like to thank the Fundação para a Ciência e a Tecnologia (FCT) and the Royal College of Music for the financial support towards this research.

Finally, I thank my family and friends. I am certain that this thesis would not have been possible if it weren't for you. No words will ever do justice to my immense gratitude for all that you are.

# **TABLE OF CONTENTS**

LIST OF TABLES AND FIGURES	1
LIST OF PUBLICATIONS AND PRESENTATIONS	7
PART I	9
1. INTRODUCTION	9
1.1 Theoretical underpinnings	9
1.2 Overview of thesis	
2. DEFINING WELLBEING	14
2.1 Chapter overview	14
2.2 The legacy of the medical model	14
2.3 Early foundations	
2.4 Two approaches to wellbeing	
2.4.1 Hedonic wellbeing	20
2.4.2 Eudaimonic wellbeing	21
2.4.3 Flourishing: Integrated views of wellbeing	25
3. WELLBEING STUDIES WITH MUSICIANS	
3.1 Chapter overview	
3.2 Physical injury	
3.2.1 Playing-related musculoskeletal disorders	
3.2.2 Hearing impairment	
3.2.3 Other issues	
3.2.4. The psychological impact of physical injury	
3.3 Music performance anxiety	40
3.4 Psychological illbeing	
3.4.1 Psychopathology indicators	
3.4.2 Psychopathology and creativity	
3.4.3 Eating disorders	

3.4.4 Stress	
3.5 Work-related risk factors for ill-health	52
3.5.1 Risk factors for PRMDs	52
3.5.2 Psychosocial risk-factors	53
3.6 Personality	56
3.6.1 The so-called 'Musical temperament'	56
3.6.2 Perfectionism	58
3.7 "More than the absence of disorder"	59
PART II	66
4. METHODOLOGY	66
4.1 Chapter overview	66
4.2 Research questions	66
4.3 Epistemological considerations	70
4.4 Research design	72
4.5 Methods	73
4.5.1 Sampling and recruitment	73
4.5.2 Procedure	74
4.5.3 Instruments	74
4.6 Overview of Studies	75
4.6.1 Study 1: Positive mental health profile	75
4.6.2 Study 2: Psychological distress profile	75
4.6.3 Study 3: Global and work-domain meaning	75
4.7 Research ethics	77
5. STUDY 1: MUSICIANS' POSITIVE MENTAL HEALTH PROFILE	79
5.1 Introduction	79
5.1.1 Trends in <i>positive mental health</i> research	80
5.1.2 Aims for the current study	85

5.2 Method	86
5.2.1 Instruments	86
5.2.2 Participants	93
5.2.3 Data preparation and analyses	96
5.3 Results	
5.3.1 <i>Positive mental health</i> profile for the total sample	
5.3.2 Comparison between professionals and students	
5.3.3 Positive mental health classification	
5.3.4 Comparison with other performing arts	
5.3.5 Satisfaction with Life Scale	
5.4 Discussion	130
5.4.1 Musicians' <i>positive mental health</i> profile	
5.4.2 Limitations	
5.4.3 Suggestions for further research	
6. STUDY 2: MUSICIANS' PSYCHOLOGICAL DISTRESS PROFILE	
6.1 Introduction	153
6.1.1 Psychological distress: The construct	
6.1.2 Epidemiological trends in psychological distress	
6.1.3 Psychological distress trends in occupational health studies	
6.1.4 Psychological distress trends in student populations	
6.1.5 Aims for the current study	
6.2 Method	
6.2.1 Instruments: The Kessler Psychological Distress Scale (K6)	
6.2.2 Participants	
6.2.3 Data preparation and analyses	
6.3 Results	
6.3.1 Psychological distress profile for the total sample	

6.3.2 Psychological distress profile for professional musicians	
6.3.3 Psychological distress profile for music students	190
6.3.4 Comparisons between musicians and other occupational groups	192
6.3.5 Comparisons between music students and other student groups	193
6.3.6 Comparisons between musicians and other performing artists	
6.3.7 Psychological distress and <i>positive mental health</i>	196
6.4 Discussion	198
6.4.1 Overall NPD profile	
6.4.2 Professional musicians' NPD profile	
6.4.3 Music students' NPD profile	203
6.4.4 NPD and positive mental health	204
6.4.5 Limitations	205
6.4.6 Suggestions for further research	206
7.STUDY 3: GLOBAL AND WORK-DOMAIN MEANING	212
7.1 Introduction	
7.1.1 The meaning of meaning	
7.1.2 Meaning in life: Operational definition	216
7.1.3 Meaning in life: Correlates	
7.1.4 Meaningful work	
7.1.5 Aims for the current study	
7.2 Method	
7.2.1 Instruments	
7.2.2 Participants	239
7.2.3 Data preparation and analyses	
7.3 Results	
7.3.1 Meaning in life profile	245
7.3.2 Meaningful work profile	

7.3.3 Relationship between global-domain and work-domain meaning	256
7.3.4 Meaning in life and meaningful work in relation with wellbeing and il	lbeing
indicators	257
7.3.5 Comparison between musicians and other performing artists	
7.4 Discussion	265
7.4.1 Meaning in life profile	
7.4.2 Meaningful work profile	
7.4.3 Meaning in life and meaningful work	271
7.4.4 Meaning and wellbeing and illbeing indicators	271
7.4.5 Comparison with other performing arts	273
7.4.6 Limitations	274
7.4.7 Future research	275
PART III	
8. DISCUSSION AND CONCLUSION	
8.1 Chapter overview	
8.2 The research questions	
8.2.1 RQ1: Positive mental health	
8.2.2 RQ 2: Mental illness	
8.2.3 RQ 3: The Dual continua model	
8.2.4 RQ 4: Meaning in life and meaningful work	
8.3 Implications	
8.3.1 Investigating wellbeing as <i>being well</i>	
8.3.2 Thinking about wellbeing and illbeing together	
8.3.3 Promoting wellbeing well	
8.4 Limitations of this work	
8.5 Areas for future research	
8.5.1 Strengths in action	

8.5.2 Towards a flourishing 'creative industry'	
8.5.3 The meaning of meaning	
8.6 Contributions to knowledge	
REFERENCES	
APPENDICES	

# LIST OF TABLES AND FIGURES

## TABLES

# Chapter 4

Table 4.1 Overview of studies	7	6
-------------------------------	---	---

## Chapter 5

<b>Table 5.1</b> Frequencies and percentages per principal area of musical activity	.95
Table 5.2 Frequencies and percentages per category of primary specialism	.95
Table 5.3 Frequencies and percentages by category of years of professional	
experience in music	.96
<b>Table 5.4</b> Correlation matrix, means and standard deviations for the 13 MHC-LF	
sub-scales	99
Table 5.5 Cronbach's $\alpha$ for the three MHC-LF components	99
<b>Table 5.6</b> Cronbach's $\alpha$ for the five <i>Psychological wellbeing</i> sub-scales	104
<b>Table 5.7</b> Cronbach's α for the five <i>Social wellbeing</i> sub-scales	112

<b>Table 6.1</b> Psychological distress studies with professional samples      163
Table 6.2 Psychological distress studies with student samples
<b>Table 6.3</b> Frequencies and percentages per principal area of activity in music 178
<b>Table 6.4</b> Frequencies and percentages per category of primary specialism
Table 6.5 Frequencies and percentages by category of years of professional
experience in music
Table 6.6 K6 category frequencies by sex 185

<b>Table 6.7</b> Comparisons between professional musicians' NPD results and those of	of
other occupational health studies	192
Table 6.8 Comparisons between music students' K6 scores and other student	
samples	193
Table 6.9 Crosstabulation MHC-LF * K6 for the total sample of musicians	197

<b>Table 7.1</b> Frequencies per principal area of musical activity for the professional
sub-sample241
<b>Table 7.2</b> Frequencies and percentages per category of primary specialism
Table 7.3 Frequencies and percentages for years of professional experience in
music for the professional sub-sample
Table 7.4 Mean scores, standard errors and standard deviations for the MLQ
subscales across age groups
<b>Table 7.5</b> Descriptive statistics for the three WAMI sub-scales and for the overall
scale for professional musicians ( <i>n</i> = 707)250
Table 7.6 Correlations between the WAMI scores and the MiLQ meaning in life sub-
scales
Table 7.7 Estimates for a moderation effect of meaningful work (WAMI PM) in the
relationship between <i>Psychological distress</i> (K6) and <i>Presence of meaning</i> in life . 259
Table 7.8 Slope estimates for a moderation effect of meaningful work (WAMI PM)
in the relationship between <i>Psychological distress</i> (K6) and <i>Meaning in life</i>
Table 7.9 Estimates for a moderation effect of meaningful work (WAMI GG) in the
relationship between Psychological distress (K6) and Meaning in life
Table 7.10 Slope estimates for a moderation effect of meaningful work (WAMI GG)
in the relationship between Psychological distress (K6) and Meaning in life

## FIGURES

<b>Figure 5.1</b> Musicians' age distribution by sex ( $n = 1014$ )
Figure 5.2 Positive affect across age categories for male and female musicians 101
Figure 5.3 Mean scores and standard errors for the six Psychological wellbeing
components for the total musician sample (n=1014) 102
Figure 5.4 Mean scores and standard errors for <i>Self-acceptance</i> by age category 105
Figure 5.5 Mean scores and standard errors for Environmental mastery by age
category
Figure 5.6 Mean scores and standard errors for <i>Positive relations</i> by age category
Figure 5.7 Mean scores and standard errors for <i>Personal growth</i> by age category 108
Figure 5.8 Mean scores and standard errors for <i>Autonomy</i> by age category
Figure 5.9 Mean scores and standard errors for <i>Purpose in life</i> by age category 110
<b>Figure 5.10</b> Mean scores for the six <i>Psychological wellbeing</i> sub-scales across age categories
<b>Figure 5.11</b> Mean scores and standard errors for the five <i>Social wellbeing</i> sub-scales. 111
<b>Figure 5.12</b> Mean scores and standard errors for <i>Social contribution</i> by age category
<b>Figure 5.13</b> Mean scores and standard errors for <i>Social integration</i> by age category
<b>Figure 5.14</b> Mean scores and standard errors for <i>Social acceptance</i> by age category
Figure 5.15 Mean scores and standard errors for <i>Social actualization</i> by age category

Figure 5.16 Mean scores and standard errors for Social coherence by age category
Figure 5.17 Mean scores and standard errors for <i>Positive affect</i> , for professional
musicians and music students
Figure 5.18 Mean scores and standard errors for Life evaluation, for professional
musicians and music students
Figure 5.19 Mean scores and standard errors for the six sub-scales of <i>Psychological</i>
wellbeing, for professional musicians and music students
Figure 5.20 Mean scores and standard errors for the five sub-scales of Social
wellbeing, for professional musicians and music students
Figure 5.21 Percentages across the three categories of positive mental health for
musicians and general population (from Keyes, 2002)
Figure 5.22 Percentages across the three categories of positive mental health for
professional musicians and music students
Figure 5.23 Positive affect mean scores and standard errors for musicians, dancers
and actors124
Figure 5.24 Life evaluation mean scores and standard errors for musicians, dancers
and actors
Figure 5.25 Psychological wellbeing mean scores and standard errors for musicians,
dancers and actors
Figure 5.26 Social wellbeing mean scores and standard errors for musicians, dancers
and actors127
Figure 5.27 Percentages for the three categories of positive mental health for
musicians and other performing artists
<ul><li>musicians and other performing artists</li></ul>

# Chapter 6

**Figure 6.1** Frequencies per age category split by professionals and students...... 177

Figure 6.2 K6 scores across the three categories for all musicians (top) and split by
professionals and students (bottom)
Figure 6.3 Percentages for K6 categories by sex, age, student/professional status,
specialism and geographical area of work/study184
Figure 6.4 Relationship between K6 score and age, for women and men with
confidence intervals
Figure 6.5 K6 total score per age category
Figure 6.6 Percentages for the K6 categories for professionals and students 188
Figure 6.7 Percentages across NMI, MMI and SMI for sex, age, area of activity,
specialism, years of professional experience, continent of work, contract/freelance
status and parallel career status among professionals (n = 760)
Figure 6.8 Percentages for NMI, MMI and SMI for sex, age category and primary
specialism for music students (n = 222)
Figure 6.9 K6 mean scores and standard errors for musicians, dancers and actor
Figure 6.10 Percentages across K6 categories for musicians and other performing
artists
Figure 6.11 Means for each K6 item for musicians, dancers and actors196

Figure 7.1 Frequencies per age category for Sample 1 (professionals and students)
Figure 7.2 Mean scores for <i>Presence of meaning</i> across age categories by sex 247
Figure 7.3 Mean scores for <i>Search for meaning</i> across age categories by sex
Figure 7.4 Mean scores for Presence of meaning and Search for meaning across
types of activity
Figure 7.5 Means and standard errors for <i>Positive meaning</i> by type of activity252
Figure 7.6 Means and standard errors for <i>Meaning-making through work</i> by 253

type of activity
Figure 7.7 Means and standard errors for Greater good motivations by type of
activity
Figure 7.8 Means and standard errors for Overall meaningful work by type of
activity
<b>Figure 7.9</b> Interaction effect of age in the relationship between Presence of meaning in life (MLQ-P) and Psychological distress (K6)
Figure 7.10 Plot for meaningful work (WAMI PM) as a moderator in the relationship
between Psychological distress (K6) and Meaning in life
<b>Figure 7.11</b> Plot for meaningful work (WAMI GG) as a moderator in the relationship between Psychological distress (K6) and Meaning in life261
<b>Figure 7.12</b> <i>Presence of meaning</i> and <i>Search for meaning</i> scores and standard errors for for musicians, dancers and actors
Figure 7.13 Mean scores and standard errors for the Work and Meaning Inventory
sub-scales and total scale for musicians, dancers and actors

## LIST OF PUBLICATIONS AND PRESENTATIONS

The following publications and presentations were based on the contents of this thesis.

Ascenso, S., Delle Fave, A., Perkins, R., & Williamon, A. (*in press*). Fostering musicians' wellbeing. In G. McPherson (Eds.). *The Oxford Handbook of Music Performance*. Oxford University Press.

Ascenso, S. (2021). *Positive Psychology: A new lens on musicians' wellbeing* [Public lecture]. INTERACT guest lecture series, McGill University, Montreal, Canada.

Ascenso, S. (2021). *An introduction to musicians' wellbeing* [Public lecture], Trinity Western University, British Columbia, Canada.

Ascenso, S. (2019). *Musicians' wellbeing* [Public lecture], Royal Welsh College of Music & Drama, Cardiff, UK.

Ascenso, S. (2019). *Mind the Mind: Fostering wellbeing in music education* [Conference presentation], RNCM Music Education Conference, Royal Northern College of Music, Manchester, UK.

Ascenso, S. (2018). *Mind the Mind: Findings on mental health in dance* [Conference presentation], 28th Annual Conference of the International Association for Dance Medicine and Science, Helsinki, Finland.

Ascenso, S. (2018). *Musicians' wellbeing: An introduction* [Public lecture], King's College London, London, UK.

Ascenso, S. (2017). *Mind the Mind: A profile of mental health in the performing arts* [Graduate award keynote], International Symposium on Performance Science, Reykjavík, Iceland.

Ascenso, S. (2017). *More than the absence of disorder: The lost lens on musicians' psychological wellbeing* [Conference presentation], International Symposium of the Performing Arts Medicine Association, Snowmass, Colorado, USA.

Ascenso, S. (2017). *Musicians' wellbeing* [Public lecture], Crescendo Summer Institute of the Arts, Tokaj, Hungary.

# **SUPERVISION**

This thesis was supervised by Professor Aaron Williamon (principal supervisor), Professor Rosie Perkins (co-supervisor) and Professor Antonella Delle Fave (external advisor).

# FUNDING

The research presented in this thesis was funded by the Fundação para a Ciência e a Tecnologia (FCT, Portugal) through the grant FRH/BD/124188/2016 and by the Royal College of Music through a Barry Shaw Award.

## PART I

## **1. INTRODUCTION**

Wellbeing has been focus of study since ancient philosophy and stands now as one of the most researched subjects across a wide variety of disciplines including economics, psychology, sociology and education. The link between wellbeing and desirable occupational outcomes has led to a growing interest in addressing the topic in relation to specific professional groups. The starting point for the current thesis was the realization that musicians' wellbeing studies seemed oblivious to the most recent proposals on its conceptualization and assessment, and were yet to accompany the paradigm shifts that have shaped the debate about the topic. The goal of this thesis is to draw a profile of musicians' mental wellbeing that makes justice to the construct and can contribute to knowledge on how to advance towards wellbeing promotion for musicians that is theoretically-based and embedded in strong empirical foundations. This section introduces the theoretical underpinnings for this research and its aims, ending with a thesis overview.

### 1.1 Theoretical underpinnings

From the start of psychology as a scientific discipline, it thrived in understanding, conceptualizing, assessing, categorizing and treating illness. In the 1950's, however, the humanist psychology school started drawing attention to the unbalanced focus of the field. Abraham Maslow and Carl Rogers (1954; 1963), among others, began re-equating psychology's mission as the scientific study of healthy human beings and optimal psychological functioning, besides the study of dysfunction. As Maslow (1954) warned then, "psychology has been far more successful on the negative than on the positive side. It has revealed to us much about man's shortcomings, his illness, his sins, but little about his potentialities, his virtues, his achievable aspirations, or his full psychological height. It is as if psychology has voluntarily restricted itself to only half its rightful jurisdiction, the darker, meaner half" (p. 354). Despite their innovative vision, however, the humanists' intentions stood mainly at the level of theoretical discussions and did not translate into a fully systematic body of empirical evidence. In the same period, social

psychologist Marie Jahoda very timely suggested that "the absence of mental illness is not a sufficient indicator of mental health" (Jahoda, 1958, p. 15), bringing forth the concept of *positive mental health*.

At the end of the 1960's, a major finding was also influential in laying the groundwork for new trajectories in conceptualizing wellbeing. Bradburn (1969) evidenced that pleasant and unpleasant affect are independent, have different correlates, and don't simply stand as opposites of each other or two ends on the same continuum (see also Bradburn and Caplovitz, 1965). Psychologists started to realize that the two needed to be investigated separately and that eliminating negative emotional states would not necessarily lead to increases in positive ones. It became clear that contrary to what seemed to typically happen for physical health, knowledge about mental health needed to go beyond just the understanding of illness. Despite this however, research on the positive spectrum of human experience still remained shy, with mental health equated for decades as the opposite of mental illness. In a context dominated by the strongly engrained medical model, it was assumed that the eradication of mental illness would translate into a mentally healthy population.

The positive side of human functioning continued to have some presence in psychology literature throughout the 1980s and 1990s, with studies addressing topics such as emotional intelligence, resilience, coping and self-efficacy. Despite some innovative work, it was not until more than four decades after Maslow's appeal that Martin Seligman re-introduced a focus on positive functioning for psychology, when being appointed president of the American Psychological Association (APA) in 1998. He encountered a field dominated by remedial initiatives, where the ratio of negative to positively focused research papers was 21 to 1. He found a professional class of experts in repairing psychological damage, who had very little knowledge on optimal functioning and strengths or, in his words, a group of "victimologists" (Seligman, 1998, 2008). Realizing that the discipline in charge of studying human behaviour had in fact, for the most part, been reduced to the study of human limitations, set the ground for a new field within psychology—Positive Psychology. As Lopez and Gallagher (2009) point out, the goal is clear: the same tools and rigour that have been used to explain, treat and prevent illness, are to be used to understand human flourishing.

Positive Psychology is the "study of the conditions and processes that contribute to the optimal functioning of people, groups, and institutions" (Gable & Haidt, 2005, p. 103). It does not claim to be a new paradigm but rather a shift of emphasis, focusing on complementing — not replacing — traditional psychology (Vasquez, 2011). Studies within Positive Psychology have led towards important developments in the conceptualization of mental health and the construct of wellbeing has been at the core of the discipline's efforts. Being 'psychologically well' is held within this framework as qualitatively different from the absence of mental illness, and a quantifiable and predictive entity, defined by a "combination of excellent status on biological, subjective, and functional measures" (Seligman, 2008, p.3). Deviating from the focus of just minimizing harm that impregnated psychology since its beginning, the aim has been three-fold: 1) to refine the understanding of what this excellent status looks liketowards a robust definition of wellbeing; 2) to investigate the variables which predict it and 3) to optimise its promotion. Despite being a fairly recent field, two decades of research have now secured Positive Psychology's prominence in the understanding and promotion of wellbeing and it already counts on a solid evidence-base that informs practice.

Interestingly, however, when looking at wellbeing studies with occupational groups, performing artists are mostly absent. This is intriguing, as the field continues to be highly populated and increasingly so. For example, in the European context, the most recent EUROSTAT Culture Statistics report (EUROSTAT, 2019) documents a steady growth in the number of people working in the cultural sector throughout the five years prior to the report, with 8.7 million employees across the EU-28 in 2018, representing 3.8% of EU employment. Of these, almost a quarter belongs to the creative and performing artist category. Crucially, employment in this sector grew roughly at the same pace as total EU employment. It is surprising how artists are still to be included in mainstream occupational wellbeing profiles, which have tended to focus on business and care professions (Fave & Kocjan, 2016).

Simultaneously, despite the prolific tradition of looking at music as a tool for wellbeing promotion (see MacDonald et al., 2012 for an overview), research on musicians' wellbeing is yet to include mainstream wellbeing models. Notwithstanding an encouraging growing attention to musicians' mental health, studies in this domain have

tapped almost exclusively into illbeing. Positive Psychology's innovative approach brings new insight into our understanding of musicians' wellbeing and its strong research base offers encouraging prospects. A small number of studies with musicians have already started to adopt this framework, providing intriguing results and generally pointing to very encouraging wellbeing profiles, leading us to ponder if we have indeed been asking the right questions.

This thesis brings together Positive Psychology and Music Psychology, in the understanding of musicians' mental wellbeing. It sets out to draw a wellbeing profile of musicians guided by a theoretical lens that makes justice to its positive and multidimensional nature. Besides broadening our outlook on musicians' wellbeing, such an investigation will also allow to draw implications on the enhancement of wellbeing promotion efforts in both professional and educational contexts of music-making.

## **1.2 Overview of thesis**

This thesis is structured in four parts. The remainder of Part I presents the research base that informed this project, as follows: Chapter 2 reviews the main approaches to wellbeing research within Positive Psychology and key models that have dominated the field, focusing on the emerging construct of *positive mental health*. Specifically, it highlights the *Dual continua model* of wellbeing proposed by Keyes (2002), chosen as the guiding framework for this thesis. Chapter 3 presents a review of literature on musicians' wellbeing, structured around five areas that have received the greatest attention with this population: physical injury, music performance anxiety, psychological illbeing, workrelated risk factors for illbeing and personality. The chapter ends with a critical analysis on the scarce number of studies that have integrated Positive Psychology's framework to musicians' wellbeing assessment.

Part II consists of the overarching methodological approach adopted for this thesis and its three empirical studies. Chapter 4 outlines the research questions, followed by epistemological considerations, the sampling and recruitment process, overall procedure and instruments. The three empirical studies are included in Chapters 5, 6 and 7. Each study is presented with a topic-specific literature review. As these studies were conducted with different sub-samples, their unique group of participants and methods are presented in each chapter, before each set of results and their discussion. Study 1 (Chapter 5) presents a profile of musicians' mental health through the lens of a multidimensional model. It explores three sub-questions: 1) the overall level of musicians' mental health; 2) mental health profiles of the different sub-groups within the sample (age, sex, instrument groups, professionals vs students groups) and 3) musicians' scores in the light of indicators from general population and other performing arts.

Study 2 (Chapter 6) reports a profile of musicians' psychological distress, exploring 1) musicians' general trends; 2) the prevalence of musicians with severe mental illness; 3) trends among the different sub-groups included (age, sex, type of musical activity, professionals vs students groups) and 4) musicians' scores in light of general population and other performing artists' indicators. It ends with the analysis on the validation of the *Dual continua model* with our sample, integrating wellbeing and illbeing results.

Study 3 (Chapter 7) serves as a follow-up to an existing study (Ascenso et al., 2018) that represented, to the best of our knowledge, the first multidimensional wellbeing profile of musicians through the lens of Positive Psychology models, critically reviewed in Chapter 3. We address some of its limitations through assessing musicians' sense of meaning in life and work, both key pillars of wellbeing. As with Studies 1 and 2, demographic trends are presented (sex<sup>1</sup> and age), along with profiles for the different types of musical activity and a comparison between professionals and students. Musicians' scores are also compared with indicators from other performing arts.

Finally, Part III brings the three studies together. Chapter 8 provides a global discussion and integration of findings, considerations on implications, limitations, further research, contribution to knowledge and final concluding thoughts.

<sup>&</sup>lt;sup>1</sup> Sex is used throughout this thesis as a key demographic variable (Office for National Statistics, 2011). This allowed comparison with the relevant body of research deriving from the measures adopted in this thesis, which largely used the variable sex for key demographics instead of gender.

## **2. DEFINING WELLBEING**

### 2.1 Chapter overview

This thesis aims to draw a profile of musicians' wellbeing, focusing specifically on mental wellbeing<sup>2</sup>. Our starting point is therefore to define what is meant by mental health. This chapter introduces the positive approach to mental health research and practice that guides this thesis. It looks at the frameworks of wellbeing that have been proposed within Positive Psychology, specifically, the hedonic and eudaimonic traditions of research, along with integrative multidimensional models. The frameworks reviewed were chosen on the basis that: 1) they are well represented in the wellbeing literature and 2) they have guided effective wellbeing interventions.

### 2.2 The legacy of the medical model

The recent concept of *positive mental health* is the guiding framework for this thesis. At a first glance, this expression seems like a linguistic error. Why would we need to add the word 'positive' to a construct such as health? Intriguingly, when the expression 'mental health' is used, it is automatically negatively connotated and associated with psychological disorders and negative status, not with health. On the contrary, when we speak about 'physical health', we are indeed equating it to positive physical functioning. The tendency to associate mental health with a negative construct has been marked following the fast growing professionalization of psychiatry and clinical psychology, and the need to assess and categorize disorder in order to cure pathology and mental illness (Seligman & Csikszentmihalyi, 2000). The *medical model* has been the framework guiding clinical psychology since its beginning (and indeed wellbeing studies with musicians as well, as will be later discussed in Chapter 3), and understanding its impact on the field is key to contextualizing recent shifts in wellbeing research. After uncovering the effects of this approach on the conceptualization of mental health, we will look at the new

<sup>&</sup>lt;sup>2</sup> In this thesis we use 'wellbeing' as an overarching umbrella term which includes mental wellbeing. 'Mental wellbeing' is hereon used interchangeably with 'mental health.'

framework of *positive mental health* that guides the current thesis and explore the path of wellbeing research that has emerged from this new proposal.

The *medical model* refers to the set of procedures for understanding health in which there is a complaint, a clinical history followed by examination, diagnosis, treatment, and a prognosis (Laing, 1971). This is the framework shaping the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-V; American Psychiatric Association, 2013) — the main resource used in mental health practice. Psychopathological indicators are categorized according to their defining criteria, building into larger diagnoses of mental disorders. The contribution of this model is clear, as it formed the base for a usable taxonomy of mental illness, leading to a more uniformed practice and better communication. It also translated into the construction of valid instruments to assess disorder and a thorough understanding of the risk factors that precede it. Finally, and more importantly, the medical model has aided successful pharmacological and psychological interventions (Lamers, 2012; Seligman & Csikszentmihalyi, 2000).

There are, however, downsides of the widespread DSM-based thinking of mental health. As Maddux (2009) points out, this framework risks reducing people to the sum of their problems. In line with previous work (Widiger & Samuel, 2005), Lamers (2012) expands on this point arguing that the categorical classification of mental functioning can encourage the inaccurate assumption that we are able to discern normal from abnormal behaviour in an absolute form, and that mental disorders are differentiated from normal functioning and from each other. Normal and abnormal behaviour can be seen as distinctive components along the same dimensions. For example, a person experiencing depressive mood can be, at the same time, flourishing in other areas, such as a sense of accomplishment or positive relations. As will be explored further, psychological models have now geared towards a less simplistic view of functioning, assuming that both mental health and illness can co-exist, in a complex set of patterns within the same individual (Maddux, 2009; Widiger & Samuel, 2005).

Another point streaming from the medical model is the view that mental disorders are separate entities. This is also known as *reification*. People mention a mental disorder as having 'it', while the disorder is indeed a dynamic pattern of functioning, not a fixed entity (Maddux, 2009; Lamers, 2012). This reification takes attention away from the individual's subjectivity and from the dynamic nature of psychological functioning. Interestingly, the DSM acknowledges the importance of the person behind the disorder, despite leading, in practice, to strict taxonomy procedures: "in the DSM, there is no assumption that each category of mental disorder is a completely discrete entity with absolute boundaries dividing it from other mental disorders or from no mental disorder. There is also no assumption that all individuals described as having the same mental disorder are alike in all important ways" (American Psychiatric Association, 2000, p.31). Finally, and partly due to the reasons above, Corrigan (2004) raises the point that the classification of mental disorders has led to the stigmatization of mental health and mental health care.

Alongside the proliferation of taxonomy for mental health, main stream definitions of health started to reinforce its positive nature. For example, one of the most widely accepted definitions of mental health is that proposed by the World Health Organization (WHO): "a state of wellbeing in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community" (WHO, 2005, p.1). The positive essence is also stressed in WHO's definition of *health* as contained in its constitution: "Health is a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity" (WHO, 2005, p.1). Despite widespread acceptance of this positive valence, until recently, this remained predominantly conceptual; the impact of the medical model translated into years of oblivion for empirical research into positive functioning.

Focusing on performing artists, and musicians in particular, the same issue arises. To date, there has been no systematic empirical investigation into the positive aspects of mental health of this group, which is the same as saying that musicians' wellbeing studies have indeed been investigations on illbeing, not wellbeing, and a mental wellbeing profile for this population is yet to be drawn.

As mentioned in our introduction, in 1998, Martin Seligman opened his term as president of the APA by bringing this issue to light. In his words, psychology "is halfbaked. It isn't enough for us to nullify disabling conditions and get to zero. We need to ask, what are the enabling conditions that make human beings flourish? How do we get from zero to plus five?" (Seligman, 1998, as cited in Wallis, 2005, para. 2). This was the beginning of a new field of Psychology, with the aim of applying the scientific method to studying positive symptoms. Positive Psychology has, since then, motivated an outburst of research and led, in particular, to refinement of the conceptualization of wellbeing. In what follows, we will highlight the main models of wellbeing within the Positive Psychology tradition, after expanding on their early foundations.

## 2.3 Early foundations

Despite the lengthy focus on psychopathology within psychology, research into positive aspects of functioning has, in fact a fairly long history. The concept of *positive mental health* dates back to the 1950's and the work of Marie Jahoda already mentioned. "The absence of mental illness is not a sufficient indicator of mental health" (Jahoda, 1958, p. 15). This phrase represented the embryo of what is now a solid field of research. In her key book *Current Concepts of Positive Mental Health*, Jahoda (1958) joined Maslow and the humanistic school's appeal, criticising psychologists for focusing almost completely on mental disease and being oblivious to mental health and wellbeing. She went further, arguing that a generalised concept of mental illness was itself scientifically invalid, given that what is considered deviant depends more on social conventions than on something inherent to the human mind (Jahoda, 1958).

Jahoda proposed that positive mental health is defined as good functioning of the mind in the appropriate social context, and that it implies six empirical indicators: 1) positive attitudes toward the self; 2) growth, development, and self-actualization; 3) coherence and continuity of personality (integration); 4) autonomy and self-determination—independent behaviour, and, when appropriate, non-conformity; 5) an adequate perception of reality and 6) environmental mastery. Jahoda's landmark research aimed to understand the psychology of unemployment. She highlighted that people without a job were 'unhappy' not because of financial hardships but rather through deficits in some of the above six areas (Jahoda, 1982).

Besides empirical inquiry on the elements of *positive mental health*, Jahoda's contribution was crucial on a theoretical level. She proposed the criteria for any positive mental health framework, as follows: 1) positive mental health is *multidimensional*; 2) positive mental health needs to be *operationalized*, in specific criteria; 3) positive mental health and mental illness are not in dichotomy and each should be thought of as *continua* 

(unhealthy trends can co-exist with an otherwise healthy person)—implicit in this concept is also the idea of 'gradients' of mental health; 4) positive mental health is fairly *stable* and the criteria are not just related to isolated situations people find themselves in and 5) mental health is not an absolute (Jahoda, 1958). She pointed out that the minimum standard for an individual to achieve positive mental health, according to the set criteria, was yet to be understood, and may change with age, adding that nobody reaches the optimum in all criteria and each individual has their unique way of experiencing *positive mental health* (Jahoda, 1958).

One of the strongest criticisms to Jahoda's framework was that most of the criteria outlined are only applicable to the Western world. Self-actualisation, for example—the desire for fulfilment of one's potential—is not consistently valued across cultures. In some contexts, society's potential as a whole is what matters the most (Ivtzan, 2008). Therefore many healthy people could be classed as 'abnormal' in the light of Jahoda's framework or at best, unadjusted. Despite the criticisms, Jahoda remains a pioneer in the study of *positive mental health* and her contribution left a strong mark in the field.

Another landmark work in the development and refinement of wellbeing conceptualization was Norman Bradburn and David Caplovitz's book Reports on happiness: A pilot study of behaviour related to mental health (Bradburn & Caplovitz, 1965). The authors aimed "to develop, for psychological and behavioural phenomena, time-series studies comparable to those that are commonplace in economics and demography" (Bradburn & Caplovitz 1965, p. 1). Their main assertion was that mental health, happiness and psychological wellbeing represented the same unidimensional entity. They collected data through interviews and questionnaires with 2,006 members of 450 households in Illinois. They used twelve affect descriptors (half positive, half negative) to assess individuals' experiences. It was predicted that two clusters would emerge - positive and negative emotions - which would be inversely related. As expected, there was a tendency for most items to fall into one of the two areas. However, there was one very surprising finding which laid the foundation for a significant paradigm shift. The items in one cluster were not consistently negatively associated to the items in the second. The items with the strongest negative association were "depressed or very unhappy" and "on top of the world," and these items just had a small, negligible correlation of -.19 (Bradburn & Caplovitz, 1965). Positive affect was generally unrelated

to negative affect. Bradburn & Caplovitz (1965) proposed that "happiness is a result of the relative strengths of positive and negative feelings, rather than of the absolute amount of one or the other" (Bradburn & Caplovitz 1965, p.21). That is, the presence of strong negative emotions during some period of time does not necessarily impair happiness, if there are concurrent strong positive emotions and resources. This is a pioneer proposal that radically transforms the way wellbeing is conceptualized. Negative affect doesn't necessarily lead to low wellbeing, given that there are coping mechanisms and concurrent positive emotional experiences.

Both Jahoda and Bradburn and Caplovitz set the grounds for positive mental health research by distancing their efforts from the diagnosis of psychiatric cases and focusing on the wellbeing experience of ordinary individuals in their day-to-day (Angner, 2009). During the 1990s, important contributions continued to emerge, including the effort to describe and measure mental health and mental illness not as opposite ends of a single continuum but as conditions lying on two different continua (Downie et al., 1990). From this perspective, an individual may be experiencing poor mental health — not living within an optimal range of human functioning or, in other words, not *flourishing* — while also staying free from mental illness. Conversely, some individuals may meet clinical criteria for mental disorder and *simultaneously* be experiencing high levels of positive functioning indicators. With the birth of Positive Psychology in 1998 this was thoroughly developed and wellbeing models and measurement tools started to proliferate. Two main threads of focus emerged: the hedonic and the eudaimonic traditions.

### 2.4 Two approaches to wellbeing

After decades of paying attention to the classification of disorder, it was easy to identify what wellbeing is *not*. Harder, however, was to pinpoint what exactly it *is*. In this pursuit, Positive Psychology searched for precursors in concepts dominating philosophical debate two millennia ago, including *hedonia* and *eudaimonia*. Recent research on the psychology of wellbeing abides by one of two major theoretical frameworks, or their combination: the hedonic and eudaimonic frameworks. Both represent approaches to understanding mental health from a positive perspective. However, their underlying definitions of what constitutes wellbeing differ (Ryff & Singer, 2008).

#### 2.4.1 Hedonic wellbeing

Hedonism, portrayed in works from Aristippus of Cyrene (435–356 BC), is an ethical position sustaining that pleasure is the highest good in life and that seeking it and avoiding pain represent the key determinants for human actions. The hedonic tradition of wellbeing research subscribes to this view, defining wellbeing as the maximization of positive emotions and the minimization of negative ones, along with high levels of satisfaction with one's life (Diener et al., 1999). Wellbeing is seen as subjective in the sense that each individual decides which standards they hold when evaluating how satisfied they are with their lives (Kahneman et al., 1999).

An important distinction highlighted by this line of research is the differentiation between 'happiness' and 'satisfaction'. Satisfaction refers to our judgment about the quality of our life, while happiness incorporates the experience of positive feeling or affect. While it is possible to identify wellbeing with one or the other, within hedonismrooted research, wellbeing (commonly labelled *subjective wellbeing* — SWB) involves both an emotional component (good balance between positive and negative emotions) and a judgment component (satisfaction with life) (Biswas-Diener, Kashdan & King, 2009).

Most individuals experience good levels of SWB most of the time (Diener & Diener, 1996; Biswas-Diener, Vittersø & Diener, 2009). Individual differences can, however, be detected as the result of stable traits — that is, some individuals are more predisposed to experience positive emotions and satisfaction with life. There is evidence supporting that over time SWB is fairly stable, tending to revert to a set point (Diener et al., 2006). At the same time, SWB can be affected by life experiences, such as important events or interventions. This means that despite being substantially stable, SWB can be changed and we can promote it effectively (Lyubomirsky et al., 2005).

The tremendous impact of positive emotions is now well documented, and SWB has been found to predict important health indicators such as longevity, immunity, physical fitness, psychological stability, and the capacity to bounce back quicker after challenging times (Howell et al., 2007).

#### 2.4.2 Eudaimonic wellbeing

While the hedonic tradition is focused on emotional facets of wellbeing, researchers adopting a eudaimonic perspective maintain that other important aspects of functioning need to be considered. Their perspective is grounded in the view of Aristotle (384–322 BC), who explored the idea that a good life is not found primarily through experiencing pleasure or deriving gratification from achievements, but rather through expressing virtue: doing what is worth doing. His reflections placed the concept of *eudaimonia*—literally "good" (*eu*) "spirit" (*daemon*)—as the main goal in life. For the eudaimonic approach, wellbeing represents the degree to which an individual is fully functioning, engaging in a continuous process of developing and expressing their potential, as well as building meaning both personally and socially. It encompasses pursuing intrinsic goals as ends in themselves, experiencing authenticity and satisfying the basic psychological needs of relatedness, competence and autonomy (Deci & Ryan, 2002; Huta & Waterman, 2014; Waterman et al., 2008).

An ever-growing body of research has evidenced the wide range of positive outcomes of eudaimonic wellbeing. These include better physical health (Czekierda et al., 2017), a more favorable biomarker profile including lower levels of chronic inflammation, better cardiovascular indicators (Friedman et al., 2007; Ryff, Singer & Dienberg, 2004), lower mortality (Krause, 2009), as well as reduced risk for mental illness (Keyes et al., 2010; Wood & Joseph, 2010) and greater productivity at work (Keyes & Grzywacz, 2005).

Within the field there is still high discrepancy in the operationalization of constructs and the co-existence of a wide range of models prevails. Following a classification for conceptual and operational definitions within eudaimonic research proposed by Huta and Waterman (2014), we will review the proposals that have received higher attention within this school of thought.

#### 2.4.2.1 Waterman's identity theory

Waterman (1993, 2011) was the first scholar to import the eudaimonic principles to psychology of wellbeing studies. He proposed an identity theory with self-realization as the main element. In this context, wellbeing implies identifying one's potential and strengths and acting in accordance with them. Hedonia, within this model, is seen as the enjoyment and satisfaction that arise when attaining self-realization.

Waterman equated trait-like features of wellbeing as self-discovery, perceived development of one's ability, sense of purpose and meaning, effort in pursuit of excellence, involvement, and enjoyment of activities as personally expressive. *The Questionnaire for Eudaimonic Wellbeing* (QEWB; Waterman et al., 2010) assesses these elements and is accepted as a positive functioning index. Despite standing as a robust proposal on positive functioning, Waterman's model lacks the inclusion of hedonic components of wellbeing at its core.

### 2.4.2.2 Ryff's model of psychological wellbeing

The *Psychological Wellbeing Model* (Ryff, 1989), one of the most influential contributions in wellbeing literature, is often quoted as the gold-standard framework in eudaimonia. It proposes six dimensions for wellbeing: self-acceptance, positive relations, autonomy, environmental mastery, purpose in life and personal growth.

*Self-acceptance* stands for the degree to which the individual possesses a positive attitude towards the self and one's personal life history. It implies acknowledging and accepting strengths and weaknesses and feeling positive about one's past.

*Positive relations* refers to the degree to which one "has warm, satisfying and trusting relationships with others; is concerned about the welfare of others; is capable of strong empathy, affection, and intimacy; and understands the give and take of human relationships" (Ryff, 1989, p. 1072).

The element of *Autonomy* is manifested through self-determination, self-regulation, independence, and internal locus of control. If individuals experience a high sense of autonomy, they are able to resist social pressures, regulate their behavior and self-evaluate by their own standards (Ryff, 1989).

*Environmental mastery* is defined as the ability to "choose and/or create environments suitable to personal needs and values" (Ryff & Singer, 2008, p. 25). Despite apparent similarities with other constructs (e.g. self-efficacy), Ryff (1989) places emphasis on discovering or building a context suitable to the individual's needs, values and skills. *Purpose in life* refers to the degree to which someone "has goals in life and a sense of directedness; feels there is meaning to present and past life; holds beliefs that give life purpose; and has aims and objectives for living" (Ryff, 1989, p. 1072).

Finally, *Personal growth* involves a sense of ongoing development, perceiving the self as expanding and open to new experiences, realizing one's potential over time and that one is "changing in ways that reflect self-knowledge and effectiveness" (Ryff, 1989, p. 1072). Ryff (2018) highlights that of all wellbeing facets, *Personal growth* is the closest to Aristotle's original 'eudaimonia' for being explicitly about self-realization.

One of the distinctive aspects of Ryff's model is its theoretical grounding, bringing together key Psychology theories. Having a positive view of the self is a central feature in Humanistic Psychology (Allport, 1961; Maslow, 1968; Rogers, 1961), life-span theories (Erikson, 1959; Neugarten, 1973) and also part of the pioneer proposals on mental health offered by Jahoda (1958). As Ryff (2018) points out, when developing the component of *Self-acceptance* in the model, the process of individuation (Jung, 1933)<sup>3</sup> was also integrated, especially in what concerns the need to accept one's weaknesses, leading to a richer construct than the standard views of self-esteem.

Interpersonal relationships are also a key feature across all the perspectives mentioned above. Jahoda (1958), for example, highlighted love as a central element of mental health. Maslow's (1968) proposals on self-actualization were linked with connection and empathy, and positive relations to others were part of Allport (1961)'s formulations on maturity. Erikson's (1959) stages of psychosocial development placed emphasis not only on bonding with others (intimacy) but also on guiding others (generativity). Autonomy is also part of pivotal perspectives on human functioning. Elements such as self-evaluation based on personal standards rather than external criteria (e.g. Rogers, 1961) or the importance of inward reflection in older years and the perception of freedom from norms in developmental theories (Erikson, 1959; Neugarten, 1973) were, among others, part of Ryff (1989)'s theoretical integration when defining this element.

Ryff & Singer (2008) highlight how mastery of the environment is also a key presence across influential Psychology models. The capacity to select or create

<sup>&</sup>lt;sup>3</sup> Individuation refers to the process of becoming a psychological individual, a separate whole, recognizing one's uniqueness (Jung, 1933).

environments to suit one's needs is presented by Jahoda (1958) as a central mental health feature, representing a fit between one's external and internal worlds. Developmental theories also describe the centrality of being able to control and change the environment (Erikson, 1959).

For Ryff (1989; 2018), *Purpose in life* draws significantly from existential psychology, especially the work of Frankl (1945) on the search for meaning, and the formulations of authentic living proposed by Sartre (1956), both of whom focused on suffering. Further influences include Russell (1930) and his concept of zest<sup>4</sup>, Jahoda's (1958) work highlighting personal beliefs that bring purpose and meaning in life as central to mental health, Allport (1961)'s formulations on maturity, which entailed an understanding of life's purpose, directedness and intentionality, and developmental theories depicting changing purposes across the lifespan (Erikson, 1959).

Finally, Ryff (1989)'s formulation on the element of *Personal growth* was grounded in the dynamic elements of positive functioning evolving over time highlighted in previous theories: Maslow (1968)'s self-actualization and the process of *becoming* (also part of Jahoda (1958)'s positive mental health conceptualization); Rogers (1962) and Jung (1933)'s proposals on self-realization as central to functioning; and developmental theories placing emphasis on approaching new challenges at different life periods (e.g. Erikson, 1959).

#### 2.4.2.3 Keyes's model of social wellbeing

Ryff's landmark model was expanded by Corey Keyes (1998), who pointed out that wellbeing is not merely a private phenomenon, as people are embedded in social structures, facing social tasks and challenges (Keyes, 1998). His premise was that social aspects are central to the understanding of optimal functioning. In line with the process employed by Ryff (1989), Keyes (1998) built a multidimensional model of social wellbeing rooted on central theories from sociology and social psychology (e.g. Durkheim, Marx, Erikson, among others). He proposed five dimensions for social wellbeing: social contribution, social integration, social coherence, social actualization and social acceptance. Since these have been shown to not overlap with measures of

<sup>&</sup>lt;sup>4</sup> defined as an active interest and engagement in life

emotional and psychological wellbeing, Keyes proposes that social wellbeing reflects a distinct component of *positive mental health* (Keyes, 1998).

*Social contribution* refers to the perception that one contributes with something valuable to society (Keyes, 1998).

*Social integration* depicts the judgment of the quality of one's relationship to society and the community. As Keyes (1998) points out, it is "the extent to which people feel they have something in common with others who constitute their social reality (e.g. neighborhood) as well as the degree to which they feel that they belong to their communities and society " (p. 122).

*Social coherence* refers to the perception that the social world makes sense and is consistent and predictable. Keyes (1998) highlights that healthier people, besides caring about the kind of world they live in, also have a sense of understanding it.

*Social actualization* encapsulates the perception that society is a framework with potential to develop through its institutions and citizens, enabling growth and self-actualization. Keyes (1998) highlights how healthier people maintain hope about the future of society and have the prospect that they are potential beneficiaries of social growth<sup>5</sup>.

Finally, *Social acceptance* implies holding a positive view of the social world and believing that others are capable of good. Keyes (1998) describes people who experience high social acceptance as those who trust others, think of others as kind and capable of good and hold a positive view of human nature<sup>6</sup>.

#### 2.4.3 Flourishing: Integrated views of wellbeing

In philosophy, hedonism and eudaimonism stood as almost irreconcilable frameworks. In psychology however, they have been progressively merging with each other and researchers are now incorporating both and addressing wellbeing as a complex, multidimensional phenomenon (Diener, 2009; Huta & Ryan, 2010; Stiglitz et al.,

<sup>&</sup>lt;sup>5</sup> This component is the social equivalent of personal growth.

<sup>&</sup>lt;sup>6</sup> This component is the social equivalent to self-acceptance.

2007). In recent years, the hedonic and eudaimonic perspectives have been considered distinct yet compatible and complementary. They are now assumed to represent different dimensions of wellbeing, and the presence of both is viewed as better than one or the other alone. Debate around how exactly the two traditions sit within definitions of wellbeing has been accompanied by several proposals for integrative wellbeing models. Two of the most influential integrative models are reviewed here.

#### 2.4.3.1 The Dual continua model of mental health

With the aim of establishing a comprehensive definition of *positive mental health*, Keyes proposed combining hedonic and eudaimonic components into an integrative model, consisting of three main dimensions: 1) *emotional wellbeing*, including the hedonic components of high positive and low negative affect along with high life satisfaction; 2) *psychological wellbeing*, incorporating the six dimensions proposed by Ryff; and 3) *social wellbeing*, consisting of Keyes's five dimensions (Keyes, 2002, 2007).

In summary, Keyes (2002) proposes optimal human flourishing to be seen as a *syndrome* encompassing the three features: emotional, psychological and social wellbeing. The formulations for each are borrowed from the previous landmark models reviewed above. This tripartite structure of wellbeing has received empirical support (Gallagher et al., 2009; Hone et al., 2014; Joshanloo et al., 2016; Robitschek & Keyes, 2009), including cross-culturally (Keyes, 2013) and across the lifespan (de Carvalho et al., 2016; Keyes, 2006a; Lamers et al., 2011), despite some studies suggesting different factor structures (Bower, 2017; de Bruin & du Plessis, 2015; Hides et al., 2016; Jovanović, 2015; Machado & Bandeira, 2015; Petrillo et al., 2015)

In addition, Keyes capitalized on the comprehensiveness of such an integrated model to develop a classification of mental health conditions, based on the same approach adopted to develop the *Diagnostic and Statistical Manual of Mental Disorders* (DSM; American Psychiatric Association, 2013). This manual classifies all known mental disorders through listing the related symptoms. Keyes adopted a similar approach to list *positive symptoms*, or in other words, symptoms of mental *health*. This list comprises the emotional, psychological, and social wellbeing elements integrated in the model described above. Keyes then classified mental health conditions into three different categories. If people experience high levels of positive symptoms across the three areas
of wellbeing (emotional, psychological, and social), they are considered to be *flourishing*; if they experience low levels of positive symptoms they fit the diagnosis of *languishing*; if they display scores in between, they are considered to be experiencing *moderate mental health*. In the context of this *Dual continua model*, mental health is represented on a continuum from languishing to flourishing, which includes elements of *positive* functioning and not pathological symptoms, the latter lying on a different continuum of mental illness. Therefore, if a person is languishing, this portrays incomplete mental health but it does not imply conclusions on mental *illness* (Keyes, 2002).

Several studies have subsequently confirmed that mental health and mental illness may be best represented as two related but separate continua, rather than lying on a single spectrum. This has been validated in varied cultures (Keyes, 2006a; Keyes et al., 2008; Westerhof & Keyes, 2010) and using different instruments (Westerhof & Keyes, 2010; Suldo & Shaffer, 2008; Greenspoon & Saklofske, 2001; Compton et al., 1996; Headey et al., 1993).

In the context of this model, as Lamers et al. (2011) clearly articulate, the absence of illness is neither necessary nor sufficient to guarantee that someone lives a productive and balanced life. In other words, one can be free of mental illness and not be living to the best of one's potential. Conversely, an individual experiencing symptoms of illness can cope and maintain relatively good levels of *positive mental health* at the same time.

An important implication is that individuals are only completely well when they experience *both* low levels of symptoms of disorder *and* high levels of positive functioning symptoms. Another interesting repercussion is that the effects of *positive mental health* on functioning can be relatively independent from the impact of disorder. Existing evidence within this model supports this (Keyes, 2006a, 2006b; Keyes et al., 2008; Westerhof & Keyes, 2010).

#### 2.4.3.2 The PERMA model

Hedonic and eudaimonic dimensions are also integrated in another wellbeing model that has received considerable attention: the *PERMA model of flourishing* (Seligman, 2011). Martin Seligman defined happiness as what we choose for its own sake, arguing: "we often choose what makes us feel good, but it is very important to realize that

often our choices are not made for the sake of how we will feel. I chose to listen to my sixyear-old's excruciating piano recital last night, not because it made me feel good but because it is my parental duty and part of what gives my life meaning" (p. 11). Based on empirical evidence confirming the distinction and complementary role of hedonic and eudaimonic elements, he proposed *The Wellbeing Theory*, commonly known as the PERMA model: wellbeing can be represented as the combination of *Positive emotion*, *Engagement*, *Relationships*, *Meaning*, and *Accomplishment*.

The PERMA model has given a great contribution in spreading the word about Positive Psychology and strengthening the point that wellbeing is more than just feeling good. Categorical models like the PERMA are helpful to summarize complex information and are easily applicable to designing interventions. Despite it being a recent model, this has already been true for PERMA in both clinical and non-clinical settings, where interventions built upon the five pillars have been shown successful (e.g. Seligman et al., 2006; Seligman et al., 2009; Slavin et al., 2012).

However, a key distinction between this model and those of Ryff and Keyes is that it was not founded upon theoretical grounds. There is an absence of a clearly articulated formal theory of flourishing in contrast, for example, with Ryff's model, deeply rooted in psychological research. It also lacks a robust measure for assessment, which prevents it from being further refined. Finally, the criteria for wellbeing are not clear: are all the factors weighted the same way? What "well" means in relation to the five components and how they are articulated with each other remains to be clarified. It nevertheless represents a valuable attempt to describe wellbeing.

In sum, from the span of models reviewed, despite the diversity in what constitutes wellbeing, three clear facets emerge: 1) that wellbeing is more than the absence of illbeing; 2) that the 'more than' implies multidimensionality—it is expressed through multiple operationalized and measurable components and 3) that both hedonic and eudaimonic dimensions contribute to wellbeing.

In the pursuit of moving forward with the understanding of what constitutes optimal functioning in the music sector, Positive Psychology offers useful models. Having defined wellbeing within this framework, it will now be useful to review the existing wellbeing research among musicians, before outlining the methodological plan for this thesis.

# **3. WELLBEING STUDIES WITH MUSICIANS**

## 3.1 Chapter overview

Having reviewed the central wellbeing models that have shaped debate in recent years, this chapter will address the areas of study that have received the most attention when addressing musicians' wellbeing. Although the topic of musicians' wellbeing has been on the radar of research for some time, the establishment of performing arts medicine as a discipline was central for the development of knowledge on the topic. This was linked with both the emergence of specialized clinics during the 1980s, alongside with the launch of a dedicated journal in 1986 – *Medical Problems of Performing Artists.* 

Studies have typically centred on illbeing and are quick to put forth the music profession as endemically challenging. Research has tended to gear around five areas: 1) physical injury<sup>7</sup>; 2) music performance anxiety; 3) psychological illbeing, 4) work-related risk-factors for illbeing and 5) personality. This chapter reviews musicians' wellbeing research-base across these five areas, before introducing the gaps that the current thesis aims to address.

## **3.2 Physical injury**

Physical injury has dominated musicians' wellbeing research. High rates of injury have been consistently reported for professional musicians and music students, the most common including playing-related musculoskeletal disorders (PRMDs) (Fishbein et al., 1988; Parry, 2004; Rotter et al., 2020; Watson, 2009). Hearing impairments have also been focus of attention (Hasson et al., 2009; Kähäri et al., 2001; Kähäri et al., 2004; Schink et al., 2014).

Both areas of injury have been linked to psychological distress (Bair et al., 2008; Dersh et al., 2002; Hasson et al., 2009; Krog et al., 2010; Tambs, 2004).

<sup>&</sup>lt;sup>7</sup> Despite the focus of this thesis on mental wellbeing, we will review studies addressing musicians' physical health as well. Although there is convenience in the separation between physical and psychological challenges, this division in rather spurious as both are closely linked. Physical injury can have an impact on musicians' psychological functioning and psychological functioning can affect injury and both are therefore included in the review.

#### 3.2.1 Playing-related musculoskeletal disorders

Following close investigation on the subjective meaning of playing-related injury for musicians, Zaza and colleagues (Zaza et al., 1998; Zaza & Farewell, 1997) introduced the expression "playing-related musculoskeletal disorders" (PRMDs) and suggested a widely-used operational definition: PRMDs refer to "pain, weakness, lack of control, numbness, tingling, or other symptoms that interfere with the individual's ability to play one's instrument at the level one is accustomed to, not including transient aches or pains" (Zaza et al., 1998, p. 2016). The designation implicitly assumes that playing is the shared aetiological factor. These issues are broadly grouped into three categories: pain and musculoskeletal overuse, entrapment neuropathies, and focal dystonia (Barton et al., 2008; Dommerholt, 2009; Foxman & Burgel, 2006).

### 3.2.1.1 Pain and musculoskeletal overuse

Throughout the research-base, there is often an interchangeable use of different expressions to describe the pain and inflammation caused by the overuse/excessive stressing of tissues including 'musculoskeletal pain syndrome', 'regional pain syndrome', 'cumulative trauma disorder', 'overuse syndrome' or 'repetitive strain injury' (RSI), with the latter being widely used (Rotter et al., 2020; Hoppmann, 2010; Bejjani et al., 1996). Reviews often use the label PRMD as an aggregate expression to include all of these. Rietveld (2013) warns for need of rigour, as RSI or overuse are simply descriptive expressions, not diagnostic labels. Overuse can lead to different diagnoses, such as ligament sprain, tendinitis, tenosynovitis, shoulder impingement and rotator cuff syndrome (Bird, 2013; Lederman, 2003; Rietveld, 2013). The areas most affected by PRMDs are the upper limbs, neck and the back (Kenny & Ackermann, 2015; Rietveld, 2013; Sheibani-Rad et al., 2013).

Prevalence rates for PRMDs in musicians are highly varied (Baadjou et al., 2016; Bragge et al., 2006; Jacukowicz, 2016; Kok et al., 2016; Paarup et al., 2011; Vervainioti & Alexopoulos, 2015; Wu, 2007; Zaza et al., 1998), stemming from a body of research operating with heterogenous definitions, methodological inconsistencies and disparate diagnostic criteria, which severely limits the possibility for comparisons across studies. Some studies describe point prevalence (proportion presenting a condition at a given point in time), which in studies with professional musicians has ranged between 9 and 68 % (Ackermann et al., 2012; Davies & Mangion, 2002; Manchester, 2006); others focus on period prevalence (cases present at any given time during a specific period) such as 12-month or life-time prevalence (proportion who at some point in life have had the condition). As Rotter et al. (2020) have recently systematised, 12-month prevalence rates range between 41 and 93% and lifetime prevalence between 62 and 93% (Baadjou et al., 2016; Bragge et al., 2006; Jacukowicz, 2016; Kok et al., 2016; Paarup et al., 2011; Vervainioti & Alexopoulos, 2015; Wu, 2007; Zaza et al., 1998).

Most studies make use of small samples. The largest cross-sectional investigation to date considered to be representative, was a seminal study with 2212 symphony orchestra and opera musicians from the International Conference of Symphony and Opera Musicians (ICSOM) in the US (Fishbein et al., 1988). 82% of the sample reported having experienced a medical playing-related problem, with 76% suffering from at least one problem severe enough to impact performance and 36% reporting having had four severe problems.

With student samples, percentages of those reporting musculoskeletal symptoms also vary, ranging from 10.4% (Manchester & Flieder, 1991) to 89% (Ioannou & Altenmüller, 2015; Zetterberg et al., 1998). A study with 106 US college music students highlighted a lifetime prevalence for playing-related injuries of up to 87% (Guptill et al., 2000). Stanek and colleagues (2017) found that 67% of 1007 college musicians in the US reported performance-related pain.

Overall, the degree to which the impact on functionality is addressed varies across studies and different assessment instruments are used, most of which are not validated (Kok et al., 2013, 2016). The most recent review (Rotter et al., 2020) integrating 109 studies, highlights how study designs, terminology, and outcomes are highly disparate. Inclusion criteria are rarely mentioned, confounders are not included in the analyses (e.g. other physical load, other conditions) and the relationship between instrument-specific workload and symptoms is not evaluated. The authors highlight that various disorders are inconsistently included under the PRMD acronym and the definition of exposure is typically insufficient. Despite a fairly large research base, causal evidence remains low. The authors conclude that given the considerable methodological concerns most studies raise, "sufficient statements cannot be provided for the prevalence, risk factors, prevention and effectiveness of treatment of MCD<sup>8</sup> in professional musicians" (p.180), echoing concerns raised by previous reviews (e.g. Bragge et al., 2006).

The PRMD label already assumes implicit causality (i.e. playing as the aetiological factor) which, for cross-sectional studies cannot be ascertained. There is indeed a clear gap in cohort studies, which would allow to observe the number of new cases during a period of time among a group initially free of disease (incidence). Of the six small cohort studies in the literature, half do not assess risk factors (Manchester & Flieder, 1991; Manchester & Lustik, 1989; Manchester, 1988) and only three define their study populations clearly (Nusseck et al., 2017; Fjellman-Wiklund & Sundelin, 1998; Piątkowska et al., 2016).

Fjellman-Wiklund and Sundelin (1998) assessed 36 music teachers in Sweden for "work-related musculoskeletal disorders and discomfort" and found an initial 12-month prevalence of 80%, which grew to 92% after 8 years. The reported discomfort was primarily in the neck, shoulders, and lower back, tended to be of long duration and increased over the years. Piatkowska et al., (2016) assessed 45 violin, cello and pianos students in Poland throughout 18 weeks, tested at 6 week intervals. They found a moderate degree of disability and pain for all groups. After 12 weeks, pain was lower for pianists compared to cellists. The level of general physical health was lowest for cello students. Nusseck et al. (2017) assessed 288 music students from 5 universities in Germany for playing-related health problems with a battery of standardized questionnaires covering both somatic and psychological complaints. They found no differences between universities, a prevalence rate of 29% in the first year, of 42% in the second year and 36% in the third year, with significant difference between the first and second, but not between the second and third. Overall these studies suggest that groups with intensive engagement in music-making, either at a professional or academic level, tend to report playing-related illbeing issues.

Women report experiencing PRMD more than men and are described across studies as being more susceptible to injury (Abréu-Ramos & Micheo, 2007; Baadjou et al., 2016; Davies & Mangion, 2002; Dersh et al., 2002; Fishbein et al., 1988; Fotiadis et al., 2013; Heming, 2004; Kaneko et al., 2005; Kok et al., 2016; Leaver et al., 2011; Wahlström-

<sup>&</sup>lt;sup>8</sup> Musculoskeletal Complaints and Disorders

Edling & Fjellman-Wiklund, 2009). It remains to be clarified if this reflects true differences or just a tendency of women to be more open to report.

Despite most studies observing lower injury rates among older musicians, the lack of cohort studies makes it difficult to present reliable statements on the effects of age. It remains unclear if this represents a dropout effect, or so-called "healthy worker effect". The population of older musicians includes those who made it in the profession, which could already represent the fittest. The advantage of the older could also reflect an optimisation of practice and performing strategies, or increased tolerance to pain (Fishbein et al., 1988; Salonen, 2018; Smith, 1992). It has been estimated that 12% of professional musicians dropout of their career because of PRMDs (Abréu-Ramos & Micheo, 2007).

Overall, strings and keyboard musicians are consistently described as the most affected instrument groups for PRMD (Abréu-Ramos & Micheo, 2007; Ackerman & Adams, 2004; Črnivec, 2004; Davies & Mangion, 2002; Fotiadis et al., 2013; Hansen & Reed, 2006; Lahme et al., 2014; Lee et al., 2013; Parry, 2003; Rietveld, 2013). The lowest prevalence rates are found among brass players (Rotter et al., 2020).

Early onsets, typically during high school, are recurrent across studies, going as early as 7 years of age (Ranelli et al., 2008). Burkholder & Brandfonbrener (2004) retrospectively analysed data from 314 student musicians (age 18 and younger) and found a higher proportion of ligamentous laxity of the wrist and fingers when compared to the general population. Overall, the upper extremity was the most common injury location and the most frequent presentations were musculoskeletal pain syndrome and excessive muscle tension. Kok and colleagues (2013) found that a larger proportion of music students experienced musculoskeletal symptoms when compared to medical students, especially in the upper body.

Interestingly, Russell & Benedetto (2014) did not find concerning results when assessing musculoskeletal discomfort among elementary, middle school, and high school string musicians, along with psychological issues (enjoyment of playing and stress about performing). Levels of musculoskeletal discomfort were low, with no effect of school level, instrument, or sex. Participants from elementary school enjoyed playing their instruments the most but all groups showed high averages of enjoyment. The authors argue that young string players may not have the level of engagement with playing found in college students, echoing previous work (Russell, 2006), highlighting also the potential role of improved, health-informed, string pedagogy. Besides professional and student samples, PRMDs have also been reported by amateur musicians (Kok et al., 2018; Mehrparvar et al., 2012; Morse et al., 2000).

### 3.2.1.2 Entrapment neuropathies

Entrapment neuropathy encompasses any peripheral nerve disorder caused by compression, stretch, or friction of a nerve. Overall, between 22 and 48% of complaints among musicians are related to entrapments (Amadio, 2003; Charness, 1992; Lederman, 2003; Lederman, 2010; Rosenbaum et al., 2015). These include entrapments of the ulnar nerve, thoracic outlet syndrome (entrapment in the thoracic area) and entrapment of the median nerve, also known as carpal tunnel syndrome, which is the most common entrapment reported among musicians (Kenny & Ackermann, 2012; Lederman, 2010; Sheibani-Rad et al., 2013).

Symptoms include pain, weakness, tingling, numbness or a sense of burning (Lederman, 2010). Instrument-specific patterns have been identified for this type of condition, with clear links with playing positions and instrument-related pressure or muscle contraction patterns (Kenny & Ackermann, 2012; Lederman, 2006).

### 3.2.1.3 Focal dystonia

The most serious movement disorder among musicians is focal dystonia (FD) (Altenmüller et al., 2015), often responsible for the end of musicians' careers (Altenmüller & Jabusch, 2010). FD is a central nervous system disorder characterised by disruptions in sensory input and motor output. It leads to loss of voluntary motor control and persistent incoordination, affecting the part of the body involved in task-specific highly trained movement patterns. It can manifest in two forms: focal hand dystonia and embouchure dystonia (Altenmüller, 2003; Frucht et al., 2001; Furuya et al., 2015; Jabusch et al., 2004; Jankovic & Ashoori, 2008).

The typical FD presentation does not include pain. However, musicians can try to compensate the symptoms through muscle overuse which can cause strain (Altenmüller

et al., 2015). When compared with other activities at risk for dystonia, musicians in the classical sector present the highest risk (Frucht, 2009). FD affects approximately 1% of professional musicians (Altenmüller & Jabusch, 2010; Rietveld & Leijnse, 2013). Psychological functioning (especially perfectionism and anxiety) can play a part in the development of FD (Altenmüller, 2003; Ioannou et al., 2016; Jabusch & Altenmüller, 2006; Lederman, 2001).

Overall, review studies on musicians' injury are unanimous in raising concerns about limitations that are preventing optimal identification of risk factors and interventions. Despite a large number of outputs, causal evidence remains low (see also Stanhope et al., 2019). Nevertheless, the rates of injury are indeed worrying and more so given the early onsets. An encouraging greater awareness of the need and steps towards prevention of injury is now becoming more evident across the sector, and this body of research is crucially driving the discussion of health in music conservatoires and in professional contexts (Ackermann et al., 2014).

#### 3.2.2 Hearing impairment

Besides PRMDs, musicians are also highly prone to noise-induced hearing loss (NIHL) (Jansen et al., 2009). A cohort-study in Germany reported that professional musicians were almost four times more likely to develop NIHL than the general population, echoing previous results (Schink et al., 2014; Zhao et al., 2010).

NIHL results from excessive exposure to sound and is typically permanent and irreversible (Sataloff & Sataloff, 2005). It can involve conduction difficulties, sensorineural impairment or both and can be manifested by deficits in speech recognition, pitch discrimination, hyperacusis (heightened sensitivity to sounds), diplacusis (hearing the same sound as two separate ones, differently in each ear, and that may be distinct in pitch, tone, or timing) and/or tinnitus (commonly described as a ringing in the ears) (Chasin, 2008).

Orchestral players are frequently exposed to sound levels exceeding the limits regulated by national occupational health and safety authorities, both in rehearsal and performance (Jansson & Karlsson, 1983), but also in individual practice (Emmerich et al., 2008; Laitinen, 2005; O'Brien et al., 2013; Schmidt et al., 2011). Risk is primarily

associated with one's instrument type and the repertoire (Schmidt et al., 2011) and as expected, highly exposed musicians show greater loss than less-exposed (Toppila et al., 2011).

Prevalence rates are widely varied across studies, stemming from methodological inconsistencies and researchers have called for greater rigour and assessment of exposure over a continued period of time (Lee et al., 2005; Zander et al., 2008).

Recent accounts from a UK study with professional musicians (n = 693) revealed 40.5% of self-reported hearing loss (Greasley et al., 2020). Ackermann and colleagues (2014) report hearing loss in 43% of an Australian orchestral sample (n = 377), adding to reports by Zander et al. (2008) of a 16% rate for tinnitus and 17.5% for severe impairment at high frequencies, also among orchestral musicians. A recent assessment among Danish symphony orchestras found a 19% prevalence for tinnitus with severe impact on daily life, with cumulative lifetime sound exposure appearing as the most important factor contributing to prevalence and severity. Interestingly, when comparing a sample of orchestral musicians with nonexposed adults, Toppila et al. (2011) found comparable rates of hearing loss. However, in the musicians' sample there was a higher representation of tinnitus and hyperacusis.

Research within academic contexts is growing, as sound level exposure has been documented to also go beyond the safety limits for both teachers (Maffei et al., 2011; Olson et al., 2016) and students (Phillips & Mace, 2008; Walter, 2009).

## 3.2.3 Other issues

Adding to musculoskeletal injury and hearing impairment, there is also evidence of other health issues affecting musicians.

Both singers and music teachers commonly report voice problems usually attributed to voice misuse, especially vocal fold conditions such as nodules, polyps, haemorrhage, oedema (Foxman & Burgel, 2006; Rodríguez Lozano et al., 2011) and gastroesophageal reflux (Sataloff et al., 2010).

Approximately two-thirds of upper strings players struggle with dermatitis on the left side of the neck, known as 'fiddler's neck (Ostwald et al., 1994; Rodríguez Lozano et

al., 2011). Allergies following from the contact with the instrument materials can also occur (Gambichler et al., 2004).

There are reports of visual problems among musicians, from issues such as lighting on stage and score visibility (Beckers et al., 2016; Marmor, 2010). Wind instruments are also at risk of high intraocular pressure (Foxman & Burgel, 2006; Marmor, 2010). A study in Norway noted higher levels of gastrointestinal complaints, tiredness and mood changes among orchestral musicians when compared to the general population (Halleland et al., 2009).

A large-scale investigation with over 2000 musicians from Norway's Musician's Union found a higher prevalence of insomnia among musicians when compared to both the general Norwegian population and a sample representing Norway's general workforce. The study highlighted both nonrestorative sleep and dissatisfaction with sleep (Vaag et al., 2016).

Unhealthy patterns of alcohol consumption have also been described among musicians with levels higher than the national health standards (Ackermann et al., 2012; Kapsetaki & Easmon, 2017), as well as high regular intake of beta-blockers without medical prescription (Kenny et al., 2014).

### 3.2.4. The psychological impact of physical injury

Given the focus of the current thesis on mental health, the psychological impact of physical injury is of particular interest. A small group of studies has addressed this topic with musicians.

Aiming to understand the subjective meaning of the PRMD experience among musicians, Zaza et al. (1998) used a case-study design and interviewed twenty-seven musicians and three health professionals. Injury was consistently reported as having a devastating effect both physically, emotionally, socially, as well as financially. Participants described the experience as traumatic, a threat to one's sense of identity, accompanied with fear, guilt and negative social repercussions due to stigma associated to injury. Devastation and grief were also mentioned, a theme reinforced by further qualitative accounts (Buller, 2012).

Through an ethnographic study of her own experience of injury, Grant (2009) similarly describes guilt, shame, loneliness and depressive mood, highlighting a sense of loss of identity, in particular of a musical identity.

Guptill (2011) ran a phenomenological study with ten professional musicians who were either experiencing playing-related injuries or had been in the past. Participants reported the subjective ways in which they experienced the representation of their instruments as an extension of their bodies and how pain and injury disrupted this experience. When going through pain, musicians became more aware of their bodies, experiencing a gap between their musical intentions and expressions. Injury had a negative impact on one's sense of identity and resulted in a loss of self-esteem.

A phenomenological investigation by Schoeb and Zosso (2012) with eleven professionals, five of whom healthy and six suffering from playing-related injury, highlighted how healthy musicians focussed on overall health management strategies, while injured musicians were highly scrutinizing towards the dysfunctional body part.

Psychological distress is also often mentioned in clinical manuals, or comments on clinical management of injury, as being experienced alongside vocal dysfunction and this link has also been empirically confirmed (Dietrich et al., 2008; Jahn, 2009), although the direction of causality remains unaddressed.

Oakland et al. (2014) used Interpretative Phenomenological Analysis (IPA) to explore how an opera singer experienced non-playing related physical injury, highlighting the centrality placed in the sector in having an able body as a means to maintaining a singing identity. Injury negatively impacted the participant's selfperception and his sense of belonging to the opera sector. It was experienced as a disembodiment from the professional world of singing, leading to an identity negotiation. This theme is also echoed by Buller (2002).

In a qualitative study with a small sample of professional opera singers, Sandgren (2002) also highlighted that psychological functioning was highly dependent on vocal functioning. Difficulties in voice use were accompanied by a sense of inadequacy and invalidation of one's self-worth and professional identity. Fear of voice impairment led to perfectionism and concern about criticism, feeding a cycle of increased anxiety.

Rickert, Barrett and Ackermann (2014b) conducted a qualitative case-study with three chronically-injured professional cellists, with further interviews with a set of five orchestral managers for data triangulation. Musicians reported emotional trauma as a result of injury, as well as a sense of loss of their performer identities, diminished selfworth and depressive mood, with two participants highlighting experiencing social ostracism. Injury concealment was common along with challenges during rehabilitation, due to a poor understanding from medical staff about the demands of elite-level musical performance. This echoes previous warnings (Brandfonbrener, 2003; Rosset et al., 2000) on the lack of awareness by medical staff about the specificities of performance-related work, with injured musicians often being advised to stop playing and change professions. A reluctance by musicians to seek care and a lack of trust in the care provided has also been reported by Guptill and Golem (2008).

The psychological impact of injury has also been investigated with student populations. McCready and Reid (2007) shed light into music students' lived experiences of unplanned interruptions to study as a result of injury, through a grounded theory approach. The authors highlight a high contribution of playing their instrument to one's identity formation and life goals. Challenges included the ability to know when to stop and not play through pain; managing pressures by both self and others to continue playing while injured; frustration with their own bodies and a sense of loss of identity and control when unable to play.

In summary, overall, studies on the psychological impact of injury inquiry tend to be unanimous in reporting a strong sense of loss and grief, a negative impact on selfconcept and the need to re-negotiate one's identity. The body of evidence relies primarily on qualitative accounts. A common theme is the culture of silence and stigma surrounding musicians' injuries and the tendency to play through pain. These studies are considerably dated and it would be useful to investigate this issue currently, given the expansion on musicians' health and wellbeing initiatives across the sector.

## 3.3 Music performance anxiety

A second factor for ill health among musicians receiving major attention is music performance anxiety (MPA). A consensus on its definition has yet to be reached although Salmon (1990)'s proposal is frequently cited: "the experience of persisting, distressing apprehension about and/or actual impairment of, performance skills in a public context, to a degree unwarranted given the individual's musical aptitude, training, and level of preparation" (p.3). Later, Kenny (2010) suggested an alternative that would not imply expertise, stressing that MPA can be experienced across levels of ability and preparation, defining MPA as "the experience of marked and persistent anxious apprehension related to musical performance that has arisen through underlying biological and/or psychological vulnerabilities and/or specific anxiety-conditioning experiences. (...) It affects musicians across the lifespan and is at least partially independent of years of training, practice, and level of musical accomplishment" (p.433).

The effect of MPA on performance quality has been shown to depend on the interaction between the musician's level of trait anxiety, the level of task mastery, and perceived situational stress (Wilson, 2002; Kenny & Ackermann, 2012). Besides music, performance anxiety is reported in a variety of activities, including public speaking (Merritt et al., 2001), sports (Hall et al., 1998), test-taking (Elliot & McGregor, 1999), maths performance (Ashcraft & Faust, 1994), and other performing arts such as acting (Marchant-Haycox & Wilson, 1992) and dance (Walker & Nordin-Bates, 2010).

The different MPA definitions across studies are fairly concordant in acknowledging the triad of interactive yet partially independent symptoms: cognitive (e.g. loss of focus, self-doubt), somatic (e.g. sweating, tachycardia, tremor, dry mouth, shortness of breath) and behavioural (e.g. avoidance, pacing, fidgeting) (Craske & Craig, 1984; Ostwald et al., 1994; Wesner et al., 1990)

The majority of musicians reports MPA immediately before and during performances, although anticipatory anxiety for a longer period is also reported (van Kemenade et al., 1995). Despite a lack of theoretical foundations for MPA and a gap on aetiology considerations across the research base, there is evidence on commonly self-reported causes by musicians: pressure from self, excessive arousal, inadequate preparation for performance, health issues and trait anxiety (Ackermann et al., 2014; Kenny et al., 2014).

Most MPA studies have been conducted with orchestral musicians and are still limited to cross-sectional designs. The existing case report and intervention studies make use of very small samples and the large-scale research available is considerably dated. Estimates of prevalence are widely varied. Fishbein et al. (1988) provided the largest sample to date involving 2212 musicians, of which 24% reported MPA. A recent review (Fernholz et al., 2019), found a variation in prevalence rates from 16.5% to 60% across studies and there are studies reporting percentages in the 70%'s (James, 2000).

A close look at this body of work suggests high measurement variability. Different terms are used, followed by different operational definitions (when at all present). Some teams use 'stage fright' (e.g. Fishbein et al., 1988), while others enquire about 'performance anxiety' (e.g. van Kemenade et al., 1995) and there are different formulations on intensity, impact and symptomatology. Some studies assess point-prevalence, others lifetime prevalence and none of the existing studies follows criteria from established diagnostic classification systems, while relying only on self-report. There is also a methodological gap on risk factor assessment.

Most studies support that women are more likely to report MPA than men (Brugués, 2011; Fishbein et al., 1988; Hildebrandt et al., 2012; Middlestadt, 1990; Osborne & Franklin, 2002; Sinden, 1999; Wesner et al., 1990) in line with what is observed for anxiety disorders (American Psychiatric Association, 2013; Lewinsohn et al., 1998; Wittchen et al., 2011). Some studies, however, did not find differences between sexes (Khalsa et al., 2009; van Kemenade et al., 1995).

MPA is reported across all age groups and children, teenagers, university students and professional musicians report similar symptoms (Braden et al., 2015; Brugués, 2011). Most studies observe grater rates of MPA for younger musicians (Brugués, 2011; Fishbein et al., 1988; Kenny et al., 2014; Middlestadt, 1990; Steptoe & Fidler, 1987), as reported for other anxiety disorders (Bandelow & Michaelis, 2015). However, this is also not consensual. For example, van Kemenade et al. (1995) found no age effect, also resonating with Wesner et al. (1990). The cross-sectional nature of these studies makes it impossible to find out if a potential age effect is explained by specific risk factors younger musicians are exposed to (e.g. transition to professional, puberty, financial uncertainty), by adaptation processes, dropouts, or a combination of these.

Students report significantly higher MPA than professionals (Steptoe & Fidler, 1987), which is partly confounded by the age trends reported above. Undergraduate music majors report higher MPA levels than students in majors outside of music (Robson & Kenny, 2017).

Orchestral musicians report auditions as the activity most conducive to MPA (Spahn et al., 2016; Cox & Kenardy, 1993; Karmeier, 2012). Pit orchestra players report more severe MPA than musicians who work both in pit and stage performances (Kenny et al., 2016). Those working in the Western classical tradition report higher rates of performance anxiety than professionals working in other genres (Papageorgi et al., 2013) and students in a classically-oriented programme report higher rates than jazz majors (Kaspersen & Gotestam, 2002), although jazz students still experience a significant level of MPA (Martin-Gagnon & Creech, 2019).

Overall, there is consensus that rates of MPA are alarming across the sector. There seems to be a shared assumption, however, that MPA is akin to mental disorder, an inaccuracy previously flagged by Brodsky (1996) that deserves further attention. Performance anxiety has not been classified in the most recent version of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5) outside of a diagnosis for social anxiety disorder (SAD) (American Psychiatric Association, 2013) and is therefore only considered a mental disorder in specific circumstances—i.e. persistent symptoms for at least six months with considerable impairment to daily functioning. Impairment and functionality are not always assessed in MPA studies making it almost impossible to reach conclusions about the proportion of musicians qualifying for mental disorder. It is also not always made clear whether the reported experiences of MPA happen in isolation or in the context of other pre-existing anxiety disorders, such as Generalized Anxiety Disorder, or whether the MPA experiences are chronic or acute.

Research on MPA has tended to be confused with research on psychological wellbeing, mainly due to the ambiguity imposed by the studies themselves. In addition, recent reports with high-profile professional musicians (Ascenso et al., 2017) have highlighted that MPA is not perceived as a central challenge to wellbeing as much as other factors such as, for example, a clear sense of self and meaning. The strong research focus on MPA can be obscuring a wide range of other phenomena that may indeed deserve equal attention. Nevertheless, MPA studies have brought an invaluable contribution to our understanding of musicians' ill-health thus far.

## 3.4 Psychological illbeing

Musicians have also been associated with psychological illbeing beyond MPA, with reference to a wide variety of issues. Some studies focus on broad psychopathology indicators, others make strong statements about mental illness diagnoses, especially in relation to creativity. Stress has also been investigated, often tied to analyses of musicians' psychosocial work environment risk-factors (Ackermann et al., 2014; Barbar et al., 2014; Kapsetaki & Easmon, 2017; Kyaga et al., 2013; Raeburn, 1987; Raeburn et al., 2003; Voltmer et al., 2012). Naturally, psychological illbeing has also been associated with both musculoskeletal injury (Baadjou et al., 2016; Sandell et al., 2009) and hearing loss (Hasson et al., 2009; Laitinen & Poulsen, 2008). In what follow we summarize these areas of findings.

## 3.4.1 Psychopathology indicators

Kenny et al. (2014) assessed psychopathology indicators among 377 orchestral musicians in Australia. Measures included the *Kenny Music Performance Anxiety Inventory revised* (K-MPAI; Kenny, 2009), the *State-Trait Anxiety Inventory* (STAIT-T; Spielberger, 1989), the *Anxiety Sensitivity Index* (Reiss et al., 1986), the *Social Phobia Inventory* (SPIN; Connor et al., 2000), the *Primary Care Evaluation of Mental Disorders Patient Health Questionnaire* (PRIME-MD PHQ; Spitzer et al., 1999) and the *Anxiety and Depression Detector* (Means-Christensen et al., 2006). The authors describe high rates of social phobia (33%), depression (32%) and PTSD (22%). Younger musicians reported higher anxiety and women reported higher trait anxiety, MPA, social anxiety and depression than men. The authors further note that despite the expected sex differences for the STAI-T and K-MPAI, the social phobia results indicated no sex differences, with a high proportion of men meeting the criterion for social phobia, contradicting the trend of population studies.

Interestingly, while these results were published under the title: "Psychological well-being in professional orchestral musicians in Australia", with a claim that the study "presents the first population level data on the psychological profile of elite professional musicians in Australia" (p.17), only illness measures were included. As discussed before, none of the constructs assessed overlap with wellbeing but rather constitute illbeing and

hence no conclusions about psychological wellbeing can be taken. In an attempt to address the issue, the authors acknowledge the gap in an assessment of positive coping strategies, but partially miss the point. Not only is wellbeing a different construct from coping<sup>9</sup>, a profile of wellbeing can only be claimed when wellbeing is what is being assessed. The best possible profile for the musicians in this study with the measures used, would be an absence of depression and of different anxiety presentations. Furthermore, the study makes diagnostic claims relying on self-report from screening measures, raising concerns on its validity as a profile of musicians' psychopathology.

Similarly, Barbar et al. (2014) evidenced a high rate of psychopathology indicators in 230 Brazilian musicians (including professionals, students and amateurs). Their measures also included the *Social Phobia Inventory* (SPIN – Connor et al., 2000) along with the *Beck Anxiety Inventory* (BAI; Beck & Steer, 1993), *Patient Health Questionnaire-*9 (PHQ-9; Kroenke et al., 2001) that also screens for major depression along with the *Selfstatements During Public Performance* (SSPS-D-adapted from Hofmann & Dibartolo, 2000), covering subjective perceptions about performance.

Interestingly, for the total sample, the means for the SPIN, BAI and PHQ-9 were below the cut-off points for psychopathology. There was, nevertheless, a 13% prevalence of moderate or severe degree of anxiety, 19% prevalence of social anxiety and 20% prevalence of depression symptoms. The authors suggest their findings to be higher than values reported for general population citing examples with Brazilian samples. However, the studies cited make use of clinical diagnostic interviews, which again hinders comparisons. For the SSPS-D, musicians reported a predominance of positive cognitions over negative ones. The sample in this study was heterogeneous, with the majority of participants (61.3%) describing themselves as amateurs and only 19% reporting music to be their only occupation which severely impairs interpretation. It also relies on selfreport from screening instruments to make statements on clinical diagnosis as already raised.

Vaag et al. (2015) focused on psychological distress among Norwegian musicians, including pop, rock, jazz, classical, traditional and mixed genres. Using the Hopkins

<sup>&</sup>lt;sup>9</sup> Lazarus and Folkman (1984) suggest a useful definition of coping as "constantly changing cognitive and behavioural efforts to manage, [that is master, tolerate, reduce, minimize] specific external and/or internal demands, [and conflicts among them], that are appraised as taxing or exceeding the resources of the person" (p.141).

Symptom Checklist (HSC-25), which allows for self-report of anxiety and depression symptoms, the authors reported a 17.5% rate of psychological distress, with a higher rate for women (21% vs 15% for men), in line with previous research on affective disorders with general population groups (Rosenfield & Mouzon, 2013). When comparing to a general workforce sample, musicians maintaining both employment and freelance work along with soloists and lead performers reported the highest prevalence of distress. Among instrument groups, comparing with the total workforce sample, vocalists, keyboard instrument and string players reported the highest prevalence of psychological distress, with the exception of the jazz group, where no effect was found. Woodwinds, brass and drum players did not show differences with general workforce indicators. When comparing with other groups, musicians differed significantly from managers, technicians and academic professionals, scoring higher than all (Vaag et al., 2015).

A major limitation of this study was that despite the musician data being collected via self-rating surveys, the comparison was made with general workforce data collected via a mix of survey and one-to-one interviews, a methodological discrepancy responsible for potential bias, hindering comparisons. Additionally, the study used the Musicians' Union for recruitment and despite providing an indication of specialism (instrument), it does not report the representation of the type of musical activity (teaching, performing, etc.) across the sample. This would have been important, as teaching and performing represent different occupational routines altogether, worth investigating separately. The sample was highly heterogenous, also impairing interpretation.

Besides surveys, there is also key data from studies making use of diagnostic interview measures. In a group of 84 musicians, Osborne (1998) assessed comorbidity with MPA (see also Osborne & Franklin, 2002) using the *Composite International Diagnostic Interview-Auto* (CIDI-A; World Health Organization, 1997). Results showed high comorbidity with specific phobia, generalized anxiety disorder (GAD), panic disorder with/without agoraphobia and major depressive disorder. One-third of musicians reporting severe MPA also presented a comorbid GAD. Once again, this study brings difficulties to the interpretation of findings given its sample: of the 84 participants, only 46 were professionals. There was also high discrepancy in music genres, which arguably correspond to considerable differences in training and occupational routines.

Finally, conclusions can only be made about illness. For a grasp on mental health we need an integration of positive functioning indicators.

Finally, it is worth noting non-peer reviewed literature that has permeated the sector, claiming alarming figures regarding musicians' mental illness. An example is a recent book by Gross and Musgrave (2020) where findings of a UK-based survey are presented. Despite claiming to be a profile of musicians' wellbeing, the sample is described as "2211 musical workers", including professional musicians but also amateurs, DJs, live crew, publishers, management and production staff. The study reports 72.1% of "musicians" (although referring to the entire sample) suffering from anxiety and 68.5% suffering from depression. Both anxiety and depression were assessed with one question on self-report of life-time prevalence (e.g. "have you ever suffered from depression?"). The results, however, are reported as point-prevalence, describing that 68.5% of musicians *suffer* from depression. Besides the absence of a sampling strategy and a highly heterogenous sample, assessment of illbeing was made as a marketing survey, without recourse to standardized multi-item measures, lacking any scientific rigour and validity. These types of outputs are widely distributed, with sensationalizing titles, contributing to a pathologizing narrative around the profession.

## 3.4.2 Psychopathology and creativity

Another group of studies of interest to this thesis links psychopathology to creativity. It suggests that creativity, considered a requisite for artistic pursuits, is linked with a greater risk of affective disorders. High prevalence of mental illness, in particular mood disorders, has been reported among creatives (Andreasen, 1987; Ludwig, 1994; Jamison, 1989; Ludwig, 1992; Post, 1994; Wills, 2003). A large-scale epidemiological study in Sweden (n = 300.000) found that patients with bipolar disorder and healthy first-degree relatives of patients with schizophrenia or bipolar disorder, were overrepresented in creative occupations, suggesting familial co-segregation of creativity and psychopathology (Kyaga et al., 2011, 2013). Patients with schizophrenia, showed comparable rates on creative professions overall in relation to controls, whilst overrepresented specifically in artistic occupations (Kyaga et al., 2013). Interestingly, however, among samples of patients with mood disorders, it has been reported that only roughly 8% could be considered creative (Akiskal & Akiskal, 1988; Mula & Trimble, 2009; Richards et al., 1988).

Some authors therefore propose that instead of full psychiatric presentations, creativity could rather be associated to sub-threshold psychopathology structures (Akiskal & Akiskal, 2007; Akiskal et al., 2005; Mula & Trimble, 2009).

Looking specifically at classical musicians, there are reports of psychopathology prevalence based on analyses of biographies, reporting mood disorders and, to a lesser extent, psychotic illness. It has been suggested that in at least one third of cases, mood disorders led to interruption of creative work and limited functionality for these musicians (e.g. Frosch, 1987; Mula & Trimble, 2009; Post, 1994; Wills, 2003). Interestingly, there is little representation of schizophrenia, a similar trend observed in biographies of poets (Jamison, 1989; Mula & Trimble, 2009).

Analysing biographies to make conclusions on clinical diagnoses brings obvious concerns on validity and reliability and is rather simplistic. For example, psychotic symptoms do not necessarily reflect psychotic illness. As Mula and Trimble (2009) point out, high rates of alcohol abuse are also commonly found in musicians' biographies and organic psychosis can be a consequence. Overall, there is no robust empirical basis for assuming classical musicians show higher rates of mental illness than the general population.

### 3.4.3 Eating disorders

More recently, eating disorders (EDs) among musician samples have also been studied, yielding a small body of contradictory evidence. Kapsetaki & Easmon (2019) investigated self-reported ED prevalence in an international sample of 301 musicians (students, professionals, retired and amateurs), using the *Eating Disorder Examination Questionnaire* (EDE-Q): 18.66% reported pathological values and the overall lifetime prevalence was 32.3%. This is concerning if we compare, for example, with the values from a recent review on ED prevalence between 2000–2018, revealing weighted means for lifetime ED of 8.4% (3.3-18.6%) for women and 2.2% (0.8-6.5%) for men (Galmiche et al., 2019). Furthermore, the study revealed high scores across all EDE-Q subcategories<sup>10</sup> for both men and women. Musicians' EDs occurred most frequently during adolescence, in line with previous research with general samples (Swanson et al.,

<sup>&</sup>lt;sup>10</sup> The Eating Disorder Examination Questionnaire (EDE-Q) is a 28-item self-reported questionnaire with four subscales: Restraint, Eating Concern, Shape Concern and Weight Concern.

2011). Soloists and musicians on tour reported a higher prevalence of EDs when compared with ensemble and non-tour musicians, respectively. Depression and stress at severe levels and anxiety at extremely severe levels, as measured by the *Depression Anxiety Stress Scale* (DASS-21) are also reported (Kapsetaki & Easmon, 2019).

DiPasquale (2012) compared prevalence of EDs among music (n = 219) and nonmusic undergraduate students and found no differences. Garner and Garfinkel (1980) report data from the *Eating Attitudes Test* (EAT) with 35 music students with overall low scores, and no musician classifying for Anorexia Nervosa. Aksoyan and Camci (2009) studied 94 musicians (members of the Turkish State Opera and Ballet and music students) and found that 81.8% of the opera singers and 32.1% of orchestra musicians classified for Orthorexia Nervosa<sup>11</sup>.

So far, ED studies have been small-scale, primarily with student samples and with severe methodological limitations, for example, the establishing of clinical diagnosis based solely on self-report measures (see Kapsetaki & Easmon, 2017 for a review). This is an area calling for an expansion of research efforts in the future. Of particular interest would be to understand the role of known risk factors for EDs such as perfectionism (Franco-Paredes et al., 2005; Lilenfeld et al., 2000; Wade et al., 2016), irregular work patterns (Tepas, 1990), low income, and general psychiatric comorbidity (Braun et al., 1994; Cizek et al., 2016) in the development of EDs among musicians. Additionally, like psychological distress studies, besides the limitation of heterogenous samples, this area has also not counted with thorough clinical assessment through structured diagnostic interviews to establish a rigorous diagnosis.

### 3.4.4 Stress

Finally, studies of illbeing among musicians have also focused on stress, often associated with the psychosocial challenges of musicians' work environment (subsection 3.5.2).

Using ICSOM's sample from 47 symphony orchestras (see section 3.2), Middlestadt & Fishbein (1988) asked participants if they considered the stress they

<sup>&</sup>lt;sup>11</sup> Orthorexia Nervosa is a pattern of disordered eating characterized by an obsession with healthy food (Cena et al., 2019). Although it has not yet been classified in the DSM-V, it is considered under the broader category of avoidant/restrictive food intake disorder (ARFID) (APA, 2013).

experienced on the job to be more than, less than or about the same as other professional musicians. 23% of musicians reported more perceived stress than colleagues, 61% reported no difference and 16% less stress. The study doesn't clarify how stress was defined.

Steptoe (1989) assessed 65 members of elite British orchestras and 41 advanced conservatoire students with a non-standardized questionnaire about stressful aspects of the profession. While professionals were asked about their current experiences, students were asked to respond about what they expected to experience in the profession in the future. The study reports high levels of perceived stress. Professionals flagged more distress due to "irregular work hours, extensive travelling, separation from families and the monotony of the job" (p. 7) when compared with students and were also less uncertain about regular employment. Students anticipated high relational strain among co-workers. Despite interesting insight about potential stress-inducing factors in orchestras, this study did not make use of standardized questionnaires and is also considerably dated. It can be argued that in over 30 years, the dynamic of orchestral life in Britain may be substantially different.

Overall, the proportion of musicians reporting stress varies widely across studies. For example, while Salmon et al. (1995) reported that among 154 orchestra musicians, 21% experienced moderate stress, 6% severe, and 4% extreme stress, Laitinen & Poulsen (2008) assessed a similar sample of 145 musicians and found that only around 6% experienced stress frequently or very frequently.

Overall, while some studies focus on intensity, others focus on frequency, and most do not include an operational definition of stress, leaving it at the consideration of the participant. This brings severe limitations when attempting to compare results, as the subjective meaning of the word can vary greatly and is left to be ascertained.

Some studies report significantly higher stress levels for women (Johansson & Theorell, 2003), others highlight reports of greater perception of stress from men (Hamilton et al., 1995) or no differences between sexes (Kivimaki & Jokinen, 1994). String and woodwind musicians tend to report higher stress levels than other specialisms (Johansson & Theorell, 2003; Middlestadt & Fishbein, 1988; Parasuraman & Purohit, 2000) and first violinists greater stress compared with second violinists (Holst et al.,

2012). The experience of music-making as stressful has been noted early on, among musicians under 18 (Russell & Benedetto, 2014).

It has also been suggested that musicians may somatise their stress (Ackermann, Kenny et al., 2014; Leaver et al., 2011). Research among orchestral musicians has also yielded evidence of an association between stress and lower perceived quality of work, with a greater risk of injury (Johansson & Theorell, 2003). Similarly, anecdotal reports from health professionals recognise stress as a risk factor for injury, through increased body tension (Brandfonbrener, 2006; Rickert et al., 2013). Investigating 56 orchestras worldwide (n = 1639), James (2000) reported an association between muscular tension, pain, injury symptoms and emotional strain. Similarly, Kaneko and colleagues (2005) assessed 241 musicians in Brazilian orchestras, highlighting a link between debilitating pain and emotional stress, calling for a biopsychosocial outlook.

A qualitative assessment on musicians' perceptions of psychosocial risk-factors for injury by Rickert and colleagues (2013), concluded that stress is a major contributor, through increased tension. The study suggests injured musicians may find it difficult to stop playing or seek help, for real or perceived risk of disapproval. Injury was perceived as a sign of weakness, associated with failure, poor technique and a low level of musicianship, translating into maladaptive behaviours such as playing through pain, secrecy, shame, guilt and self-blame (in line with the studies reviewed in section 3.2.4). The authors highlight that the stress potentiated by the orchestra's *modus operandi* may contribute to injury risk, which in turn is exacerbated by the potential inability to stop playing for injured musicians, from fear of negative judgment. Freelance musicians are especially at risk of concealment, due to the threat of unemployment. Again, the authors claim that the use of a generic term "stress" was useful for the musicians in the study. However, a vague conceptualization of stress is problematic and the subjective meanings were not underpinned.

Overall, there is no consistency in defining stress across studies and we find a lack in the use of standardized measures. The direction of causality in the stress-injury debate is also unclear. Ideally, a holistic approach to stress measurement would be taken, accounting for the interaction between the psychosocial and physical work environments and individual characteristics, allowing also for triangulation of assessment incorporating self-report, behavioural and physiological measures.

## 3.5 Work-related risk factors for ill-health

Adding to physical injury, MPA and general psychological illbeing, an additional growing group of studies has drawn attention to *work-related risk-factors* for both physical and psychological ill-health among musicians. The majority of studies have focussed on the development of PRMDs. Some studies, primarily with orchestras, have also brought to light general *psychosocial* risk-factors for illbeing. In what follows, we review both areas of research.

## **3.5.1 Risk factors for PRMDs**

Risk factors for PRMDs are often grouped as intrinsic (physical and/or psychological characteristics) and extrinsic (environmental) (Barton et al., 2008; Kenny & Ackermann, 2012; Mehrparvar et al., 2012; Wu, 2007) and have also been conveniently categorized into modifiable and unmodifiable (Zaza & Farewell, 1997). Unmodifiable risk-factors include sex, age, body size, flexibility, psychological traits, instrument type, anatomy and past injury (Amaral-Corrêa et al., 2018; Kok et al., 2016; Leaver et al., 2011; Wu, 2007). Modifiable risk factors include poor technique and practice methods, postural demands, sudden increase in playing time, long hours of playing, insufficient rest, poor overall fitness, challenging repertoire, poor injury management and environmental constraints such as inadequate seating conditions, temperature, visibility, as well as the need to carry instruments and equipment (Ackermann et al., 2012; Chan et al., 2014; Dommerholt, 2009; Hoppmann, 2010; Kaufman-Cohen & Ratzon, 2011; Meidell, 2011; Robitaille et al., 2018; Wu, 2007; Zaza & Farewell, 1997).

Highly repetitive movements–leading to "overuse"–are the most cited source for PRMD's (see Wu, 2007, for a review). However, repetitive movements alone are not sufficient. These interact with the *quality* of one's technique and efficiency in muscle use (Bejjani et al., 1996; Rietveld, 2013) and both intensity and duration of repetition are important (Bird, 2013; Lederman, 2010).

As mentioned in section 3.2.1, sex is a risk factor for injury and with the exception of FD which is more prevalent in men (Rietveld & Leijnse, 2013), women show more propensity to injury (Barton et al., 2008; Rosenbaum et al., 2012; Wu, 2007), especially at a younger age (Manchester, 2009). It has also been suggested that the greatest risk for injury is experienced by keyboard and string players (Barton et al., 2008).

Among younger musicians, additional risk factors can come into play, such as sudden growth spurts (Upjohn, 2018), the belief that playing in pain is acceptable (Horvath, 2008), as well as sudden increased practice intensity due to academic-related pressures (Blackie et al., 1999).

Overall, there is a recognition of the need for addressing the multifactorial aetiology of PRMDs (Yoshimura et al., 2008), looking holistically at the relationship between musician, instrument and the work environment (Foxman & Burgel, 2006). As highlighted earlier, psychosocial factors can play a role in physical injury, both in its onset and development, as well as in impacting the musicians' perception of physical discomfort (Hagberg, 1996; Russell & Benedetto, 2014). The next sub-section focusses on psychosocial work environment characteristics that have been outlined as risk-factors for both musicians' physical as well as psychological illbeing.

### 3.5.2 Psychosocial risk-factors

The psychosocial dynamics of a career in music have been addressed in relation to musculoskeletal injury (see Jacukowicz, 2016 for a review) and mental ill-health (Holst et al., 2012). The discipline required to develop musical skills to a professional standard can be highly taxing, with typically around 10,000 hours of practice as early as up to the age of 21 (Sloboda et al., 1996). Musicians engage in long periods of solitary work, are under constant public scrutiny, and may often be subjected to erratic schedules, frequent tours, disruptive travel, working patterns in unsocial hours, and potential financial uncertainty (Raeburn et al., 2003; Wills, 2003), coupled with an environment of high competition (Vervainioti & Alexopoulos, 2015). Besides a strong commitment, musical expression requires deep involvement of the self which can lead to a centrality of musical successes and failures in a musicians' evaluation of self-worth (Ascenso et al., 2017; O'Neill, 2002). Sternbach (1995) drew attention to musicians' financial insecurity, challenges in career development, disruption in family life, as well as the roller-coaster of underload/overload of work. A qualitative study with male popular musicians (Cooper & Wills, 1989) had also shed light into the underload/overload work dynamics, adding strained relationships, apprehension with career development, low self-esteem and performance anxiety as cumulative challenges.

Vaag et al. (2014) report a sense of stigma and devaluation among freelance musicians, highlighting the demands of employment uncertainty and difficulty in maintaining the family/work balance.

Of all areas of activity, the psychosocial challenges of the orchestral context have received the greatest attention, with reports of high levels of pressure from strict scrutiny, high demand for rigour and discipline, intense schedule of live performances, a rigid hierarchical structure hindering individual contributions, perceived lack of control and a high demand for collaborative skills, low autonomy and unsupportive management (Dommerholt, 2009; Fetter, 1993; Halleland et al., 2009; Holst et al., 2012; Levine & Levine, 1996; Middlestadt & Fishbein, 1988; Rickert et al., 2013, 2014a; Smith et al., 2000).

The theme of a perception of low levels of control over work and low autonomy is particularly prevalent (Holst et al., 2012; Parasuraman & Purohit, 2000; Theorell et al., 1990). A reduced ability to exert influence over one's work in order to make it more rewarding has been associated with stress, mental illness and reduced job satisfaction with non-musician populations (Bond & Bunce, 2004; Devereux et al., 2002; Hackman & Lawler, 1971). As Levine and Levine (1996) point out, referring to orchestral musicians' reduced decision latitude, "during rehearsals or concerts, musicians experience a total lack of control over their environment. They do not control when the music starts, when the music ends, or how the music goes... They are, in essence, rats in a maze, at the whim of the god with the baton."(p. 20). Artistic decisions such as tempo and interpretation are typically made by the conductor and the section leaders. Repertoire, scheduling and venues are usually set by management (Johansson & Theorell, 2003; Raymond et al., 2012) and there is a sense of exclusion from decision-making in matters affecting the orchestra (Breda & Kulesa, 1999; Meidell, 2011). Theorell et al. (1990) placed orchestral musicians' autonomy in the context of other high-demand industries and found lower levels when compared to air traffic controllers.

Assessing twelve Swedish orchestras, Johansson & Theorell (2003) highlighted work content and social support as the most important work-quality elements related to wellbeing. Holst et al. (2012) investigated psychosocial work environment among orchestral musicians in Denmark. In relation to the general workforce, musicians reported greater emotional demands, lower influence, lower social support and sense of community, as well as lower job satisfaction.

Parasuraman and Purohit (2000) evaluated the role of work environment, task difficulty, social tension, performance anxiety and lack of artistic integrity in predicting overload (i.e. distress), under-load (i.e. boredom) and job dissatisfaction among orchestra musicians<sup>12</sup>. The authors highlight that "lack of artistic integrity, task difficulty, and social tension were found to be the three most potent stressors" (p.74). Social tension and the lack of artistic integrity were related to greater distress. Social tension, work environment and lack of artistic integrity were also linked with boredom. The authors note that "the authoritarian leadership styles of some conductors and the lack of participation in program selection make many musicians feel that their skills are undervalued and underutilized, and that they are 'anonymous cogs' in the orchestra" (p.74). Job dissatisfaction was associated with social tension, lack of artistic integrity, and work environment, but interestingly, not with performance anxiety. Crucially, high job involvement was found to mitigate the negative effect of social tension and work environment on psychological distress and job dissatisfaction, as well as help towards the reduction of boredom, independently of the stressor. The study only counted with a small sample of 63 musicians and is significantly dated. However, the call to consider artistic integrity in orchestra work is crucial and echoes previous findings from research with the Vienna Symphony in the 80s (Piperek, 1981; Schulz, 1981). It also adds to early accounts pointing to the lack of opportunity for creative input among musicians (Baumol & Bowen, 1968) and, more recently, to reports on challenges regarding the level of orchestral musicians' engagement and excessive routine (Ascenso et al., 2017).

Despite a focus in orchestras, similar psychosocial work environment challenges also extend to music teachers. A cohort study among this group highlighted high

<sup>&</sup>lt;sup>12</sup> Artistic integrity was defined in the context of the study as not being given opportunities to fully use one's repertoire of skills.

demands, monotony, low authority over decisions, while noting a perception of good social support (Fjellman-Wiklund & Sundelin, 1998).

Overall, this body of research has highlighted important correlates spanning from both occupational and personal demands and resources. Most studies indicate that there are inherent stressors of musicians' type of work that deserve attention (e.g., artistic integrity, workload). Unfortunately, the research base remains severely limited with a resounding gap in longitudinal studies. A crucial hinderance of cross-sectional designs in this area is that both exposure and outcomes are measured at the same time, which prevents conclusions on causality. It would also be highly valuable to identify the impact of a broader range of potential psychosocial factors and crucially, their interaction among each other as well as with protective factors.

Adding to the focus on the work environment, another group of studies inextricably tied to musicians' wellbeing has focused on individual characteristics, especially personality profiles.

## **3.6 Personality**

The so-called 'musical temperament' (Kemp, 1996) has been discussed in relation to musicians' ill-health for decades. It has been suggested both that musicians tend to exhibit personality traits linked with mental illness *and* that the sources of pressure experienced in the profession may be further exacerbated by personality traits<sup>13</sup>.

### 3.6.1 The so-called 'musical temperament'

In his landmark book *The Musical Temperament*, Kemp (1996) summarized his research suggesting that musicians tended to display a typical personality profile characterised by introversion (a trait associated with psychological distress (Kotov et al., 2010)), independence (aligned with the trait of openness to experience) and a heightened

<sup>&</sup>lt;sup>13</sup> Personality traits are stable characteristics, considerably influenced by genetics (Jang et al., 1996). A frequently cited framework in personality research is commonly know as the Big Five (Goldberg, 1990) or five-factor model of personality (FFM) (Costa & McCrae, 1992) and outlines a categorization of five traits: extraversion (sociability, activity, positive emotionality, and energetic approach toward surroundings); agreeableness (altruism, modesty, tender-mindedness, trust); conscientiousness (adherence to norms and rules, planning, and task organizing and prioritizing); neuroticism (negative emotionality) and openness to experience (artistic interest, positive attitude to new ideas, willingness to discover the new).

degree of trait anxiety (denoting neuroticism). Kemp's volume has remained a popular resource for musicians and researchers alike. His research, however, relied primarily on student samples and is considerably dated. There has been no consistent empirical confirmation of any of these claims and evidence remains contradictory.

While some studies support high prevalence of introversion among musicians (Marchant-Haycox & Wilson, 1992), or higher levels of introversion than population norms (Hamilton et al., 1995), others have contradicted that (Butkovic & Dopudj, 2017; Buttsworth & Smith, 1995; Gjermunds et al., 2020; Haller & Courvoisier, 2010). In a UK study among 350 university music students, Shuter-Dyson (2000) describes higher extroversion than population norms using the *Revised Eysenck Personality Questionnaire* (Revised EPQ). Further research using the same scale with 168 church musicians revealed higher introversion than population norms for female musicians but higher extraversion for males (Shuter-Dyson, 2006), and a recent study by Vaag et al. (2018) found mixed results depending on specialism.

Regarding openness to experience, it has been described as very highly scored (Gjermunds et al., 2020) and the most distinguishable personality trait when comparing musicians to general workforce samples, with musicians showing higher scores irrespective of specialism (Butkovic & Dopudj, 2017; Vaag et al., 2018). However, this is not verified when comparing with specific groups such as psychology students (Buttsworth & Smith, 1995; Haller & Courvoisier, 2010).

The trends with neuroticism are also not conclusive. It has been suggested that musicians tend to score highly (Cooper & Wills, 1989). This trait has been strongly associated with anxiety and depression (Brunes et al., 2013; Kotov et al., 2010). Vaag et al. (2018) report a higher degree of neuroticism when comparing to the general workforce with the exception of percussionists, woodwind and brass players. Other studies have found no differences between musicians and other groups (Butkovic & Dopudj, 2017; Gjermunds et al., 2020; Haller & Courvoisier, 2010) or lower levels for musicians (Buttsworth & Smith, 1995).

For the trait of conscientiousness, Stoeber and Eismann (2007) found high scores among young musicians, whereas Yöndem et al. (2017) found low scores. Gjermunds et al. (2020), reported lower levels of conscientiousness when comparing musicians to nonmusicians and Vaag et al. (2018) report a similar pattern when comparing to the general workforce.

Overall, there seems to be a lack of consistent results to support Kemp (1996)'s claims. So far, designs have remained mainly cross-sectional, which brings the risk of a confounding effect, as answers to personality surveys can be contaminated by current mood (Clark et al., 1994). It is also not clear if personality is influenced by a career in music or if a career in music tends to be the choice of certain personality profiles. For example, Corrigall et al. (2013) found that personality predicts musical training, when controlling for the effects of demographics and cognitive ability, with openness-to-experience being the most predictive dimension.

Besides the 'big five', another aspect of personality receiving some attention among musicians has been perfectionism.

### 3.6.2 Perfectionism

Perfectionism is characterized by maintaining high personal standards, a high level of self-critical evaluation and/or concern over mistakes (Frost et al., 1990; Hill & Curran, 2016) and is now widely acknowledged as a multidimensional construct, varying along a continuum (Frost et al., 1990). Stoeber and Otto (2006) explored the key distinction between two major dimensions: perfectionistic strivings (PS) and perfectionistic concerns (PC).

The dimension of striving for perfection and maintaining high personal standards (PS) has been linked with positive outcomes such as enhanced performance, effective goal-setting (Gotwals et al., 2012; Stoeber et al., 2015), emotional intelligence and life satisfaction (Smith et al., 2015). The dimension of perfectionistic concerns (PC)<sup>14</sup> has been associated with low levels of emotional intelligence, anxiety, depressive mood, psychological distress and avoidant coping strategies (Flett & Hewitt, 2002).

The research base on perfectionism among musicians is still reduced and focused on the relationship between perfectionism and MPA. Three studies have investigated this association with children and teenagers (Stoeber & Eismann, 2007; Dempsey, 2015;

<sup>&</sup>lt;sup>14</sup> defined as fear of mistakes and of negative social evaluation, doubts about one's actions, and negative reactions to imperfection

Patston & Osborne, 2016), four studies with college music students (Sinden, 1999; Diaz, 2018; Sarıkaya & Kurtaslan, 2018; Butković et al., 2021), three studies with professionals (Mor et al., 1995; Kenny et al., 2004; Kobori et al., 2011) and two studies including both students and professionals (Gorges et al., 2007; Dobos et al., 2019).

Across the research base, it is consensual that the degree to which musicians experience debilitating MPA is strongly associated with—or even predicted by maladaptive perfectionism. There are conflicting findings, however, on the link between adaptive perfectionism (PS) and MPA.

Some limitations prevail across studies. Overall, the focus seems to be on negative characteristics, such as anxiety and distress, with little attention to potential benefits of striving for excellence. Some studies make use of very heterogeneous samples (e.g. Mor et al. (1995) combining musicians with other performing artists). Others do not differentiate between dimensions of perfectionism and make use of very small samples (e.g. Kenny et al., 2004).

In summary, personality studies with musicians still lack clarity and have raised more contradictions than conclusions. Further research is needed, especially making use of larger samples and allowing for robust group comparisons. A range of different personality tests have been used, also hindering comparisons. The existing research base does not provide empirical support to hold the popular assumption that musicians display a distinguishable personality profile that would predispose for illbeing.

## 3.7 "More than the absence of disorder"

When looking at the considerable efforts dedicated to understand musicians' wellbeing across the five areas reviewed above, the main indicators used are indicators of disorder. There seems to be an assumption that if musicians are not suffering from debilitating conditions, they are well. Looking specifically at mental health, it tends to be assessed as mental illness and stereotypes prevail. It is assumed that the tendency towards a high prevalence of MPA denotes pervasive mental disorder and the dominating narrative is that musicians have greater challenges than other professions with some studies starting with the premise that musicians are at greater risk for mental illness. Both of these assumptions remain to be evidenced systematically. To date, there is no

large-scale study with musicians that enables firm conclusions on clinical diagnoses and, importantly, profiles of disorder do not tell us everything we need to know about wellbeing. These are, in nature, *illbeing* profiles.

Acknowledging the crucial contribution of investigating disorder, the World Health Organization's appeal that health is more than the absence of illness highlights how *both* negative and positive dimensions of functioning deserve our best efforts and attention. The music sector would largely benefit from this outlook as wellbeing promotion with musicians continues to expand. Furthermore, studies addressing musicians' mental health are largely presented in a theoretical vacuum. Rarely is wellbeing defined and mainstream models are seldom used as guiding lenses. As described in Chapter 2, Positive Psychology provides a valuable framework towards the understanding of how to create conditions to allow musicians to flourish, with robust, empirically-validated models of wellbeing. Aware of the challenges and strains within the music profession, what happens when we investigate musicians' positive functioning (the *well* of wellbeing)? Does a professional life in music bring any opportunity for flourishing?

This line of research with musicians is still in its very early stages. Some compelling results, however, are beginning to emerge. When musicians are asked to rate their positive functioning, scores are generally high and, for some dimensions, higher than indicators from general population samples. Although methodological differences across studies call for extra caution in such comparisons, this trend is indeed revealing.

First, orchestral musicians report being exceptionally satisfied with their work (90% reporting high job satisfaction), a significantly higher result than what is reported by other professions, namely: clerical workers (40–70%), human relations (70%) and industrial workers (50–60%) (Kivimaki & Jokinen, 1994). This is accompanied by reports of higher perceived skill variety and the suggestion that musicians' satisfaction with their jobs may be explained by music-making allowing for a greater platform towards self-realization when compared with the other occupations included in the study. Perceived stress levels in the same study were comparable to human relation workers, but greater than clerical and industrial workers (Kivimaki & Jokinen, 1994; see also Brodsky, 1996). More recently, Leaver et al. (2011) found that 93% of 243 musicians from British symphony orchestras reported being satisfied or very satisfied with their job. There is

also evidence of greater commitment to work when comparing musicians to the general workforce (Holst et al., 2012).

Similarly, in a study with 145 musicians from Danish symphony orchestras, Laitinen and Poulsen (2008) found that 55% completely agreed that their work is inspiring and meaningful. Despite the tendency for illness indicators prevalent in early studies, Steptoe (1989) had also highlighted musicians' reports on positive aspects of the profession, such as pleasure of playing in an orchestra, the variety of the job along with the excitement of performance and travelling. Musicians also report enjoyment of their profession, even when enduring PRMDs (Lima et al., 2015) and a strong sense of calling<sup>15</sup> toward music (Dobrow, 2013). A recent study among elite musicians in Slovenia has also reported very good levels of life satisfaction (Habe et al., 2019).

Second, adding to the positive landscape in job and life satisfaction among professionals, encouraging results have also been noted with music students. A recent screening with 483 students from ten European conservatoires used the Short Warwick-*Wellbeing Scale* (Stewart-Brown et al., 2009)<sup>16</sup>. Music students Edinburgh Mental reported higher wellbeing and lower fatigue than comparable samples of non-musicians, levels health despite low of self-reported responsibility and stress management, high perfectionistic strivings as well as limited deployment of coping strategies, poor sleep quality and low self-rated health (Araújo et al., 2017).

Music-making has also been associated with moments of optimal experience or *flow* - an important indicator of wellbeing<sup>17</sup>. Music's link with flow is present from the very early writings on the topic. Csikszentmihalyi (1975; 1990; 1997) suggested that artists and athletes are especially prone to experience flow, highlighting music's potential to sustain intrinsic motivation. Enhanced experiences of flow have been accounted amongst music students and teachers (e.g. Smolej-Fritz & Avsec, 2007; Bakker, 2005) and flow has been shown to predict musical achievement in young musicians (O'Neill, 1999). It has also been associated with higher levels of creativity and quality in composition

<sup>&</sup>lt;sup>15</sup> defined as a consuming meaningful passion

<sup>&</sup>lt;sup>16</sup> a 7-item questionnaire assessing hedonic and eudaimonic wellbeing

<sup>&</sup>lt;sup>17</sup> Flow is defined as "a state in which people are so involved in an activity that nothing else seems to matter; experience is so enjoyable that people will continue to do it even at great cost, for the sheer sake of doing it" (Csikszentmihalyi, 1990, p.4). It is characterized by the perception of high challenges and high skill levels, clear goals, deep concentration, positive affect, control and autonomous motivation (Csikszentmihalyi, 2014). It happens when the individual goes above their average experience of challenge and there is total immersion and investment. These experiences, described as autotelic, carry high intrinsic reward and motivation to return to them (Csikszentmihalyi, 1990).

(MacDonald et al., 2006; Byrne et al., 2003). Recent research reported a greater experience of flow by orchestral musicians than general population in relation to a particular live music performance (Spahn et al., 2021). Proneness to flow has been highlighted as a key predictor of the number of hours spent practicing (Butkovic et al., 2015; Marin & Bhattacharya, 2013) and some studies have focused on the relationship between flow and music performance anxiety, evidencing a negative association (Fullagar et al., 2013; Kirchner et al., 2008; Wrigley & Emmerson, 2013).

Fourth, when assessed through multidimensional instruments derived from wellestablished models, musicians' wellbeing scores are high across all dimensions and, crucially, higher or comparable to general population indicators for all. With an international sample of 601 professional musicians, Ascenso et al. (2018) assessed wellbeing using the PERMA-profiler, designed as a self-report survey for multidimensional wellbeing along the five components of the PERMA model (Seligman, 2011) (see Chapter 2 for the model description). Musicians reported high scores across all dimensions. When compared with general population indicators, musicians' scores were significantly higher for *Positive Emotion*, *Relationships*, and *Meaning* and, crucially, comparable for *Engagement* and *Accomplishment*. The high scores were transversal to all the types of professional activity represented in the study: orchestral, choral, small ensemble, solo, conducting, and composition. In addition to good levels of positive functioning, results on negative affect were mainly low and, importantly, slightly lower than general population indicators. An extremely high score for *Meaning* stood as one of the key findings and, as Ascenso et al. (2018) highlight, can help interpret the apparent dissonance between the mostly negative mental health profile drawn in previous research and the positive results of this study. Adding to the conceptual diversity (or absence of conceptualisation) and the tendency for negatively-oriented research already discussed, profiles of wellbeing based solely on affective components will likely fail to fully grasp musicians' experience. In line with this, a striking result from this study is Positive Emotion as the lowest of all components of PERMA for musicians, despite remaining largely above the mid-point of the scale. Feeling content and satisfied may not be, therefore, on its own, the best indicator of musicians' wellbeing. This study left a crucial question unanswered: are musicians experiencing high meaning in life overall, in the work-domain, or both?
Another study assessing musicians' wellbeing multidimensionally using the PERMA model adopted a phenomenological approach, aiming to unpack musicians' subjective meanings attributed to the experience of wellbeing across the five components (Ascenso et al., 2017). Six elite-level musicians representing the main areas of professional activity in music (solo, orchestral, choral, chamber, conducting and composing) participated. Two interviews were conducted with each participant, separated by two weeks of diary record-keeping allowing for both global accounts and daily evaluations. All musicians reported high wellbeing. A clear sense of identity appeared as an overarching sustainer of wellbeing. Intriguingly, all musicians reported a perception of not being a "typical musician" for experiencing high wellbeing. As Ascenso et al. (2017) highlighted, a stereotype with respect to the music profession as a source of strain seems to prevail and to be deep enough to permeate musicians' identity construction. It remains to be clarified what feeds musicians' perceptions of what is "typical". Arguably, decades of negatively-focused research may play a role in this.

The transition to professional life was reported as the most challenging phase for musicians' flourishing. Positive emotions emerged in relation to musical moments. All types of musical activity were perceived as offering opportunities to frequently experience positive emotions through music. Varying repertoire and working with different ensembles were mentioned as central sources of engagement, along with opportunities for self-expression and autonomy in performance. Greater engagement was also reported in relation with maintaining a portfolio career, allowing for experimentation with different musical identities and varied roles outside of music. A major finding of the study was musicians' reports on a high sense of meaningfulness through work. Music-making is experienced as a highly rewarding activity (particularly when shared) and inseparable from one's sense of self. Also, musical moments seemed to gain a dual status in musicians' lives as they increased their years as professionals. On one hand, they are central to identity (as the *being* and *doing* of music are highly intertwined). On the other, more experienced professionals purposefully invest in detaching the success of musical moments from their self-evaluation, as a protective strategy for wellbeing (Ascenso et al., 2017).

Musicians' sense of accomplishment was reported as built on internal goals and oneness in performance with others. Finally, all participants experienced high satisfaction with relationships and attributed centrality to this component. Peak musical moments and the shared nature of music-making emerged as key ingredients in this domain. At the same time, flourishing in relationships was reported as one of the greatest challenges in both work and personal contexts. There were also accounts of challenges towards artistic integrity and constraints to having an individual artistic voice, despite being employed in a co-called "creative industry" (echoing Levine and Levine [1999], see section 3.5.2). Interestingly, none of the participants mentioned performance anxiety at any point in the study.

Overall, it seems like a career in music does indeed offer opportunities for flourishing. When wellbeing is assessed as the presence of positive indicators of functioning, musicians' profiles are encouraging. However, the research base remains highly unbalanced. If indeed wellbeing is *more than the absence of illbeing*, there is still a long path to walk in understanding how musicians build optimal functioning and how they experience it on a daily basis in relation to their professional activity. Three central gaps emerge from the research base reviewed in this chapter.

First, wellbeing profiles have largely been illbeing profiles. Conclusions on *well* being can only be drawn if optimal functioning is what is assessed. This is intertwined with the need to overcome the conceptual blurriness around wellbeing and the theoretical vacuum in which studies with musicians tend to navigate. There seems to be an assumption that the music sector shares a common understanding of what is meant by wellbeing. However, definitions across studies are lacking or, at best, dissonant. This makes it difficult to compare findings and draw valid conclusions. Under an umbrella of 'wellbeing' there are often different phenomena represented. The most urgent step in musicians' wellbeing research, as we have previously highlighted (Ascenso et al., 2018), is the pursuit of assessments that are theoretically-rooted, clearly operationalized and inclusive of the multidimensionality and positive nature of the construct.

In line with this, the relationship between positive functioning and psychological illness deserves careful investigation. Merely describing negative or positive profiles risks falling into a rather simplistic approach of just polling participants across discrete symptoms (Ascenso et al., 2018). We now have evidence that psychological illness can *coexist* with flourishing (Keyes, 2005, see Chapter 2). The challenge in mapping musicians' wellbeing experiences is, therefore, two-fold:

1) assess their profile as more than the absence of disorder, with a robust theoretical lens and 2) bring together the assessment of wellbeing and illbeing. Methodologically, some limitations in mental illness profiles are also recurrent and need to be addressed, namely, small sample sizes, heterogenous groups/vague inclusion criteria, and the lack of standardized measures or unsubstantiated diagnostic inferences.

A third area calling for attention is the striking finding of extremely high meaning reported by Ascenso et al. (2018). This prompts further investigation on two levels. First, a more refined evaluation of global life meaning is needed. The PERMA-profiler (Butler & Kern, 2016) assesses meaning based only on three items: *In general, to what extent do you lead a purposeful and meaningful life?, In general, to what extent do you feel that what you do in your life is valuable and worthwhile?* and *To what extent do you generally feel you have a sense of direction in your life?* Meaning is a complex construct, with distinct facets that deserve close attention. One example is the important distinction between *presence* of meaning in life (perceiving meaning at present) and *search* for meaning (actively pursuing it) (Steger et al., 2006). Secondly, the specific contribution of meaningful work is of key importance. As Steger and Shin (2010) highlight, investigating meaning in specific life domains can help understand global life meaning. Work is a central domain for meaning-making (Steger et al., 2006) and the results of Ascenso et al. (2018) steer a clarification on the role of work in musicians' overall meaning experience.

This thesis aims to address these three gaps: 1) to investigate musicians' mental health profile as the *presence* of positive indicators of functioning; 2) to investigate mental illbeing among musicians and its relationship with wellbeing and finally, 3) to clarify musicians' profile of meaning, both globally (meaning in life) but also in relation to one's work (meaningful work). The next chapter outlines the research questions guiding such endeavour and the chosen methodological design.

# **PART II**

# 4. METHODOLOGY

# 4.1 Chapter overview

Having reviewed the theoretical foundations for this thesis and the gaps in musicians' wellbeing literature, this chapter outlines its overall methodological approach. The chapter begins with the delineation of the guiding research questions and subquestions (section 4.2), followed by a discussion of their epistemological underpinnings (section 4.3) and a description of the overall research design (section 4.4). Section 4.5 presents an overview of the project's methods, including information on the participants and instruments used for data collection.

Stemming from the research questions and sub-questions, the thesis is organized into three studies. Each study was conducted with sub-samples that only partially overlap. As such, their specific methodological details including description of the sub-sample, psychometric considerations for the chosen instruments and justification for their inclusion, are expanded on separately within each study's dedicated chapter. Section 4.6 presents a summary overview of the three studies. This chapter ends with considerations on research ethics (Section 4.7).

# 4.2 Research questions

In order to address some of the gaps of previous research, this thesis is guided by four overarching research questions (RQ), comprising a total of 21 sub-questions (SQ).

As discussed, the so-called assessment of wellbeing with musicians has, thus far and only with very few exceptions, focused on illbeing and with a marked centrality around music performance anxiety. Taking the World Health Organization's (WHO) definition of health seriously, equating it as more than the absence of disease, necessarily translates into measuring something more than symptoms of illbeing, i.e., the presence of positive indicators of functioning. Keyes (2002)'s *Dual continua model* of mental health is in line with this principle, is theoretically-rooted and empirically supported, it integrates both hedonic and eudaimonic components and was therefore chosen as a lens for this project. Research question 1 steers the assessment of positive indicators of functioning accordingly, through the construct of *positive mental health*,<sup>18</sup> and encapsulates five subquestions:

# Research question 1 (RQ1): What is the *positive mental health* profile of an international sample of professional and student musicians?

Sub-questions:

*RQ 1.1*: How do musicians score on *positive mental health* indicators across emotional, psychological and social wellbeing domains?

*RQ 1.2:* What is musicians' prevalence of flourishing, moderate mental health and languishing?

*RQ 1.3:* Are there differences in *positive mental health* profiles across groups of sex and age?

*RQ 1.4 :* How does musicians' *positive mental health* profile compare with that of general population?

*RQ 1.5:* How does musicians' *positive mental health* profile compare with that of other performing artists?

RQ 1 places emphasis on an assessment of multidimensional *positive mental health*, steering an investigation of general trends across the three key areas of functioning: emotional, psychological and social wellbeing (RQ 1.1), as well as their relation to demographic variables (RQ 1.3). It also requires consideration of musicians' responses according to the various combinations of positive symptoms, following Keyes (2002)'s classification, in order to determine the prevalence of flourishing, moderate mental health and languishing (RQ 1.2). To help fully answer this question and track any potential specificity of the music profession, comparisons between musicians' results and general population indicators (RQ 1.4) as well as close professional activities (i.e. other performing arts) are also of interest (RQ 1.5).

Given the extensive literature on the music profession's negative impact on wellbeing – particularly the high prevalence of performance anxiety across studies – along with the compelling proposal to equate mental health and mental illness as

<sup>&</sup>lt;sup>18</sup> An introduction to the construct of *positive mental health* can be found in Chapter 2.

separate dimensions (see Chapter 2), both the positive and the negative continua of functioning were considered essential to provide a complete profile. While RQ1 addresses the wellbeing continuum, RQ2 addresses a profile of musicians' negative continua of functioning, through the construct of psychological distress, a robust predictor of mental illness. It encompasses eight sub-questions:

# Research question 2 (RQ2): What is the psychological distress profile of an international sample of professional and student musicians?

*RQ 2.1*: What are musicians' epidemiological trends on psychological distress according to sex and age?

RQ 2.2: What is the prevalence of severe mental illness in musicians?

*RQ 2.3*: Are there differences in psychological distress levels across different types of musical activity?

*RQ 2.4*: Are there differences in psychological distress levels between music students and professional musicians?

*RQ 2.5*: Are musicians more prone to high psychological distress than the general population?

*RQ 2.6*: Do professional musicians report higher psychological distress than other occupational samples?

*RQ 2.7*: Do music students report higher psychological distress than other student samples?

*RQ 2.8*: How do musicians' overall psychological distress indicators compare with those of other performing artists?

RQ2 steers an investigation of musicians' psychological distress prevalence<sup>19</sup> and epidemiological trends linked with sex and age (RQs 2.1 and 2.2), as well as comparisons between groups of interest: types of musical activity, students and professionals, overall sample with general population, students with other student samples and professional musicians with people engaged in other occupations, including other performing arts (RQs 2.3 to 2.8).

<sup>&</sup>lt;sup>19</sup> A review on epidemiological trends of psychological distress is presented in Study 2's dedicated chapter (Chapter 6).

After obtaining a profile of musicians' wellbeing *and* illbeing we are in a position of investigating how the two relate. In particular, through the theoretical lens adopted, we want to ascertain whether the *Dual continua model of mental health* (Keyes, 2002) validly represents musicians' experience. This is addressed by RQ3:

# Research question 3 (RQ3): Is musicians' profile of mental health and mental illness in accordance with the theoretical expectations laid out by the *Dual continua model* (Keyes, 2002)?

*RQ 3.1*. Can musicians experience mental illness *and* good levels of mental health simultaneously?

RQ3 will allow to verify if musicians' self-report of mental health and illness reflects the theoretical expectations laid out by Keyes (2002)'s ground-breaking model.

Finally, there is a need to further understand the results of the only musicians' wellbeing profile to date that has integrated a mixed-model of wellbeing to systematically assess hedonic and eudaimonic components with a large sample, reporting high levels of *Meaning* (Ascenso et al., 2018). Six follow-up investigations are deemed relevant:

1) a more thorough evaluation of the perception of *Meaning*, to clarify if the high scores represented the experience of global meaning in life and/or the experience of meaningful work (RQ 4.1 and 4.4);

2) a fine-grained evaluation of meaning in life through addressing its *dimensions* highlighted in current meaning literature: *presence* of meaning and *search* for meaning<sup>20</sup> (RQ 4.2);

3) an investigation of musicians' trends of meaning in life and meaningful work in relation to age, sex and musical activity (RQ 4.3 and 4.5);

4) clarifying whether musicians' search for global meaning in life is influenced by work meaning, as highlighted in previous research (Steger et al., 2012) (RQ 4.6);

5) exploring meaning outcomes for musicians through assessing its relationship with wellbeing and illbeing scores (RQ 4.7);

<sup>&</sup>lt;sup>20</sup> See section 3.7. A more detailed explanation of these dimensions is provided in Study 3's dedicated chapter (Chapter 7).

6) placing musicians' meaning profile in context with results from the broader performing arts field. RQ4 and its sub-questions are formulated as follows:

# Research question 4 (RQ4): What is musicians' profile of meaning in both global life and the work domain?

*RQ 4.1*: Do musicians (professionals and students) report high perceived meaning in life?

RQ 4.2: Are musicians (professionals and students) searching for meaning in life?

*RQ 4.3:* What are the trends across sex, age, and type of musical activity for *presence* of meaning in life and the *search* for meaning in life for musicians?

RQ 4.4: Do professional musicians report high perceived meaningful work?

*RQ 4.5:* What are the trends across sex, age and type of musical activity of meaningful work scores for professional musicians?

*RQ 4.6*: What is the relationship between global and work-domain meaning for professional musicians?

*RQ 4.7*: What is the relationship between musicians' global and work-domain meaning scores with wellbeing and illbeing indicators?

*RQ 4.8*: Do musicians' scores in global-level and work-level meaning differ from other performing artists?

RQ4 will allow to address crucial gaps left by Ascenso et al. (2018)'s investigation on meaning (see Chapter 3) and in so doing, contribute to the overall wellbeing profile this thesis aims to draw.

Having outlined our guiding research questions and sub-questions, it is of importance to fully address the nature of the knowledge that we aim to generate. The next section presents, therefore, our epistemological considerations.

## 4.3 Epistemological considerations

Epistemology refers to the philosophical bases of knowledge – the nature and scope of knowing and the relationship of the knower to the known. Different epistemologies lead to different methodological decisions through pointing to what is it that we want to know and how we can generate that knowledge. These philosophical underpinnings are key and provide the basis for the whole research design. They should, therefore, be clearly stated and discussed. From the beginning of this project, the main driver was the striking gap in musicians' wellbeing literature: the absence of a thorough assessment of wellbeing that does justice to both the positive nature of the construct and its multidimensionality. As it became clear that musicians' wellbeing studies have not benefitted from the outlook of well-established theoretical models, the integration of such a framework was a priority. In that context, investigating both wellbeing and illbeing together, along with their relationship, became pressing. It was also clear that a wellbeing profile of musicians needed to be comprehensive and inclusive of the different areas of activity in music, enabling to compare wellbeing indicators across music specialisms.

Including musicians in mainstream wellbeing assessment brought the prospect of also positioning musicians' trends in relation to general population indicators, for comparison. As findings from mainstream wellbeing studies with occupational groups have not included performing artists, it also became of interest to obtain indicators from performing arts outside of music. Finally, it was pressing to follow-up on one of the scarce studies where a theoretical wellbeing framework was indeed adopted with musicians, and answer some of the questions it left unaddressed.

The type of knowledge these goals portray consists of general tendencies of numerical indicators, group comparison and relationships between variables, from a large group of musicians, as diverse as possible. This project is situated therefore in a post-positivistic epistemology. As Crotty (1998) points out, in this framework, knowledge emerges from the application of structured instruments that have been shown to be valid for measuring the psychological entities to be analysed. It is assumed that one reality exists about the phenomenon to be studied. Never-the-less, it is also assumed that absolute truth will not be found and that the evidence established will be imperfect.

Having set the research questions and epistemological bases of the study, the next section explores its guiding research design.

# 4.4 Research design

From the study's research questions and the epistemological underpinnings, it became clear that the best methodological fit for this project would allow the drawing of a profile through capturing quantitative indicators on several variables, in a large sample. This profile would be interpreted, when appropriate, in light of published indicators from other studies. The goal was to collect information from standardized measures from as many musicians as possible, in a sample that would capture the occupational diversity of the Western classical music sector, including performers, composers, conductors, music teachers and music-degree students. This would then allow for musicians to be situated within other groups and to draw comparisons, where possible.

To fulfill these goals, a descriptive cross-sectional research design was adopted (Salkind, 2010; Lewis-Beck et al., 2004). Cross-sectional research is used to capture information based on data collected at a specific point in time, from a pool of participants with varied characteristics and demographics, as relevant to the research question(s). It is a type of observational design. It is not aimed at testing a causal hypothesis, but at collecting information on the characteristics of the distribution across the variables of interest for that sample, and explore associations when relevant (Aschengrau & Seage, 2020).

Cross-sectional studies have the advantage of allowing for collection of a large amount of data on multiple variables, while being inexpensive and relatively quick to conduct. They are effective in capturing a specific point in time with high detail (Lewis-Beck et al., 2004). By enabling to describe a population through a large set of objective indicators, along with the exploration of the relationship between variables of interest, this methodological approach meets the purposes of our investigation. The project consisted of a battery of standardized self-report surveys. Following our guiding research questions, three studies were devised. The overarching methodological approach was the same for all studies, including sampling, recruitment and procedure, as detailed in the following section.

#### 4.5 Methods

#### 4.5.1 Sampling and recruitment

A convenience sample of professional musicians and music students, situated within the Western classical music sector, was recruited for this project. Despite being open to musicians identifying themselves with any music genre, and acknowledging the risk of a rather simplistic categorization, the institutions and groups contacted for recruitment were linked with classical music. This was intentional, given the wide breadth of the profession translating into very dissimilar professional routines and academic trajectories, and the need to limit the scope of the investigation. Performers, composers, teachers and students within a higher education music degree of all specialisms were invited to take part. The criteria for participation were: 1) to be over 18 years of age, 2) to be fluent in English and 3) to spend the majority of time (professionally or academically) engaging in music (including performance, composition and/or music teaching). For the purposes of recruitment, a database was built and participants were contacted via major performing arts institutions including conservatoires, orchestras, opera houses, festivals and agencies, as well as through social media via performing arts forums and LinkedIn professional groups. The database included a list of all professional registered symphony orchestras and vocal ensembles worldwide. Conservatoires facilitated the access to current students and to alumni. With permission, the Living *Composers Project*<sup>2</sup> database was used to recruit composers. This is a database in development since 2000 which, on the date of data collection, listed 4648 living composers representing 99 countries. Participants from theatre and dance were also recruited, following the same criteria in relation to their area of primary specialism.

Due to the nature of the study, the number of participants was intended to be as large as possible, maximizing representativeness. A total of 1940 participants responded to recruitment. After close inspection of the dataset, 338 participants were excluded for at least one of the following reasons: a) they did not meet the study's inclusion criteria; b) they did not provide a complete dataset for at least one of the scales included in the study and/or the demographic questions and/or c) they answered the survey more than once (in which case, the first response was kept and the duplication excluded).

<sup>&</sup>lt;sup>21</sup> Developed by Dan Albertson and available via <u>http://www.composers21.com/</u>

A final n = 1602 (82.6%) were included in the project. Detailed demographic data for each study are presented in its dedicated chapter.

#### 4.5.2 Procedure

An online survey containing the selected measures for the project was built using the SurveyMonkey online platform. The survey incorporated the internal logics feature, allowing for different sub-surveys, depending on participants' responses. Two different versions were created. For participants identifying themselves as "student", the subsections of the survey specifically linked with wellbeing at work were skipped automatically (see Appendix 4.1 for the survey outline).

The survey was titled "Mind the Mind" and was presented as an investigation of wellbeing in the performing arts. A first pilot trial was run with 20 musicians, to obtain feedback about administration time, question layout and the overall flow of the survey. Following participants' feedback, an indication of the percentage of completion was added at the end of each page.

#### 4.5.3 Instruments

Stemming from the research questions outlined above, the measures included in the study were:

1) measures of *positive mental health* (RQ1): the *Mental Health Continuum Long Form* (Keyes, 2008) and the *Satisfaction with Life scale* (Diener et al., 1985);

2) a measure of psychological distress (RQ2 and RQ3): the *Kessler Scale of Psychological Distress* (Kessler et al., 2002);

3) measures on global and work-domain meaning (RQ4): the *Meaning in Life Questionnaire* (Steger et al., 2006) and the *Work and Meaning Inventory (WAMI;* Steger et al., 2012).

Each set of measures is described, contextualised and justified in the corresponding study's chapter. Additional measures assessing basic needs satisfaction at work (BNSWS; Deci et al., 2001), quality of life (SF-36; Ware Jr., 1999) and character strengths (*VIA – Values in Action Survey;* Peterson & Park, 2004, 2009) were also included

in the initial battery. The data from these measures are not reported and discussed in this thesis, as the investigation of their constructs was beyond the scope of the present research.

# 4.6 Overview of studies

#### 4.6.1 Study 1: Positive mental health profile

Study 1's aim is to generate a profile of positive psychological functioning with musicians. In so doing, this study answers RQ1 and sub-questions 1.1-1.5. The *Dual continua model* (Keyes, 2002) guides the assessment (see Chapter 2), and mental wellbeing, conceptualised as *positive mental health* (Keyes, 2002) is the central variable. This is, to the best of our knowledge, the first study in the literature addressing the construct of *positive mental health* with musicians. This study is presented in Chapter 5.

#### 4.6.2 Study 2: Psychological distress profile

The *positive mental health* profile (Study 1) allows for the investigation of the mental health continuum. Study 2 aims to investigate the profile of musicians' mental illbeing (RQ2 and sub-questions 2.1-2.8), clarifying risk of mental illness, representing the illness continuum. A concurrent goal is also to confirm if the intersection between *positive mental health* and illness follows the theoretical expectations laid out by Keyes (2002) of two related but separate continua (*Dual continua model*) (RQ3). This study represents, to the best of our knowledge, the first large-scale profile of non-specific psychological distress in the performing arts, as well as the first investigation into the *Dual continua model* of mental health with musicians. This study is reported in Chapter 6.

#### 4.6.3 Study 3: Global and work-domain meaning

The purpose of Study 3 is to investigate musicians' profiles of both global and domain-specific meaning, focusing on the work domain and in so doing, address the limitations of Ascenso et al. (2018). This study is presented in Chapter 7. An overview of the project's three studies is presented in Table 4.1.

Table 4.1. Overview of studies: aim, variables, sample, design and instruments.

Study	Aim(s)	Variables	Sample	Design	Instruments
1	Investigate musicians' profile of <i>positive mental health</i> (RQ1)	Positive mental health Satisfaction with life	N = 1014 Professionals and students	Cross-sectional	Mental Health Continuum–Long Form Satisfaction with Life Scale
2	Investigate musicians' mental illness profile through non-specific psychological distress (RQ2) Integrate musicians' profiles of mental illness and <i>positive mental</i> <i>health</i> (Study 1) through the lens of the <i>Dual continua model</i> (Keyes, 2002) (RQ3)	Psychological distress Positive mental health	N = 982 Professionals and students	Cross-sectional	Kessler Scale of Psychological Distress (K6) Mental Health Continuum–Long Form
3	Investigate musicians' meaning in life and meaning in work profiles (follow-up from Ascenso et al., 2018) (RQ4)	Meaning in life: Presence of meaning and search for meaning Meaning in work	N = 774 Professionals and students for meaning in life; Professionals only for meaning in work	Cross-sectional	Meaning in Life Questionnaire (MLQ) Work and Meaning Inventory (WAMI)

# 4.7 Research ethics

This study was conducted according to the research ethics guidelines of The British Psychological Society (2010). These considerations were central to all phases of the research design and to the writing and dissemination of results. The project was approved by the Conservatoires-UK Research Ethics Committee. Informed consent was obtained from all respondents, and no payment was given in exchange for participation.

Scientific research with human participants is a social process and, therefore, its transformative potential has to be addressed, especially when dealing with sensitive topics such as wellbeing. More than a means to an end, trying to grasp a 'reality out there', research is a structuring experience and an enabler of a new constructed reality. Having a profound respect for each participant's experience in this process was, therefore, a central concern. Being aware of the transformational power of inquiry itself, the focus was to enable spaces for self-awareness that were liberating, inspiring and sources of positive emotional experiences. To ensure participants had the freedom to express any concerns or questions, an open-response box was added at the end of the survey and participants were welcome to comment on their own experience during the study. The possibility of referral to appropriate sources of help, if needed, was offered. Email addresses for both the researcher and the principal supervisor were made available to all participants.

Participants were presented with a participant information sheet at the start of the survey (Appendix 4.1) containing a summary of the research project and the terms of consent, and were fully informed of the voluntary basis of their participation, their right to withdraw at any time and the assurance of confidentiality and anonymity<sup>22</sup>. All participants were aged 18 or above. All instruments were used with permission.

In summary, this chapter has discussed and justified the best methodological fit

<sup>&</sup>lt;sup>22</sup> The Values in Action Survey enables the possibility of a profile of one's top character strengths and participants were offered the opportunity of receiving their profile results for that measure if they wished to, upon providing a valid email address. Names and institutional information were kept strictly anonymous.

for this thesis, and established main questions guiding the research, along with its epistemological underpinnings. A rationale for a cross-sectional design was provided and ethical principles sustaining all phases of research were described.

# **5. STUDY 1: MUSICIANS' POSITIVE MENTAL HEALTH PROFILE**

#### **5.1 Introduction**

The aim of Study 1 is to investigate *positive mental health* in a sample of musicians working in the Western classical tradition<sup>23</sup>. As expounded in Chapter 3, the assessment of mental wellbeing with musicians has thus far, with very few exceptions, focused on illbeing. To do justice to the wellbeing construct as more than the absence of disorder necessarily translates into measuring the presence of positive indicators of functioning. A systematic assessment of wellbeing within this lens, with a large sample of musicians, is still absent from the research base. Furthermore, as reviewed in Chapter 2, there is unequivocal support for wellbeing's multidimensionality. A comprehensive assessment of wellbeing, covering both hedonic (feeling good and satisfied with life), and eudaimonic wellbeing (psychological and social wellbeing), is therefore considered essential.

There is also strong evidence that mental health and mental illness are best placed along two different continua that are only moderately correlated (Keyes, 2005; Weich et al., 2011; Westerhof & Keyes, 2010). One obvious implication of this dual-factor model is that mental health and illness do not stand as opposites and need to be seen as distinct indicators. Individuals are only completely well when they experience *both* low levels of symptoms of disorder *and* symptoms of positive functioning (Keyes, 2006b; Keyes et al., 2008; Westerhof & Keyes, 2010). Hence, besides a multidimensional assessment of positive indicators that translate into a profile of presence or absence of mental health, we are also interested in looking at the intersection of such a profile with the presence or absence of mental illness, conceptualising these as two related but separate continua (Keyes, 2007). Study 1 will therefore be the first step for such analysis (*a positive mental health* profile), which will be fully complete after Study 2 (mental illness profile).

This section presents a summary of findings from existing studies assessing *positive mental health*. The section ends with the aims for the current study.

<sup>&</sup>lt;sup>23</sup> The definition and features of *positive mental health* are expounded in Chapter 2.

#### 5.1.1 Trends in *positive mental health* research

As cited in Chapter 2, the landmark *Midlife in the United States Study (MIDUS)* is exemplary as the pioneer national-level assessment of all facets of *positive mental health* (PMH)–emotional, psychological, and social wellbeing. Using MIDUS data, Keyes (2002) observed demographic trends in PMH in a sample of 3032 adults between 25 and 74 years of age: a higher prevalence of languishing among females, younger adults, less educated individuals and the unmarried. Flourishing, on the other hand, was associated with being male, 45-74 years of age, married and having more than 16 years of education (Keyes, 2002). The majority of participants (65.1%) were classified in the moderate mental health category, 18.1% were flourishing and 16.8% met the criteria for Languishing. There is also evidence that flourishing individuals tend to report higher levels of life satisfaction (Keyes, 2004; 2011).

Research within the MIDUS database also shed light on the late life transition. Using data from the 1995 and 2005 rounds of the study, Snowden et al. (2010) compared changes in wellbeing for 1007 participants of three age cohorts (ages 45-54 years, 55-64 years, and 65-74 years in 1995). While scores were similar across the three in 1995, after 10 years there was a slight decline in wellbeing for older participants by 2.9%. The two younger cohorts on the other hand, reported a 1.5% increase in wellbeing, when controlling for other demographic variables and physical or mental illnesses. When looking at the components of wellbeing, this trend was only observed for emotional and psychological wellbeing. Age cohort did not predict changes in social wellbeing.

#### 5.1.1.1 Trends in emotional wellbeing

In a review covering three decades of emotional wellbeing research (Diener et al., 1999), some demographics trends emerged<sup>24</sup>. EWB is associated with education levels, good physical health, being married and having a job. There was no clear association with sex. A recent meta-analysis suggests inconsistent findings on the variable sex (Batz-Barbarich et al., 2018). Important to note is that the different components of SWB show different demographic correlates.

<sup>&</sup>lt;sup>24</sup> although relying mainly on Western samples

The relationship between age and happiness (used interchangeably with hedonic wellbeing), both in popular literature as well as in mediatic reports, has often been depicted as a U-shape – highest for people in their 20s, decreasing in midlife, rising into old age (e.g. Rauch, 2018)–bringing to the spotlight the so-called mid-life crisis. Despite some consistent U-shaped trends across large samples, including cross-cultural studies (Blanchflower & Oswald, 2008; Stone et al., 2010; Xing & Huang, 2014), evidence is highly contradictory and review studies have gained sufficient evidence to dismiss it (López Ulloa et al., 2013).

Interestingly, the elderly tend to remember midlife as one of the more positive phases (Freund & Ritter, 2009; Mehlsen et al., 2003). Using MIDUS data, it was also observed that middle-aged adults recalled their past (10 years ago) as less satisfying than their present (Lachman et al., 2008; Röcke & Lachman, 2008). Gomez et al. (2013) compared life satisfaction of young (24–29), middle-aged (49–54), and older adults (74–79 years) and found the middle-aged group to be the most satisfied with life. Older adults have also been found to report higher positive affect than middle-aged adults (Carstensen et al., 2011; Mroczek & Kolarz, 1998; Venning et al., 2011).

Summarizing thirty-three studies that addressed the U-shape trend for happiness, Galambos et al. (2020) also highlighted disparate findings, mixed patterns and high variability in low-points (when observed). Some findings portrayed U shapes with lows outside of midlife (Freund & Ritter, 2009; Kolosnitsyna et al., 2017; Laaksonen, 2018; Li, 2016) or no U-shape patterns at all (Bardo, 2017; Dolan et al., 2017; Xing & Huang, 2014).

Results also vary depending on country (Bauer et al., 2017; Laaksonen, 2018; Morgan et al., 2015; Steptoe et al., 2015), sex (Kolosnitsyna et al., 2017; Laaksonen, 2018), period of time of data collection (Kolosnitsyna et al., 2017; Olaroiu et al., 2017) and whether control variables were included (Blanchflower & Oswald, 2008; Ferrante, 2017; Hellevik, 2017). The authors argued that the robustness and generalizability of the Upattern is questionable, especially due to methodological reasons.

Cross-sectional investigations are inappropriate for any conclusions on individual change over time and these studies often rely solely on one item. When considering longitudinal assessments, evidence is also mixed and if subjective indicators are used or if key variables are controlled for, results tend to challenge the U-shape (Cheng et al., 2015; Frijters & Beatton, 2012; Galambos et al., 2020). This echoes work by Li (2016)

who, when investigating life satisfaction, evidenced that the U-shape trend emerges in cross-sectional data when looking at different birth cohorts. However, a decline across the life-span is observed when evaluating longitudinally within-person. The author argued that the age-happiness connection is rather a "cohort happiness" trend (p. 317). This has also been echoed in previous studies (Frijters & Beatton, 2012).

Contrasting the U-trend, in a sample of 1340 Dutch adults aged between 18 and 87 years, Westehof and Keyes (2010) found a positive relation between age and EWB. Interestingly, the higher levels of EWB in older adults were observed to accelerate in higher age groups, when controlled for life contexts.

Finally, when looking at life satisfaction, a commonly-reported trend is for average scores to be above the neutral point (Pavot & Diener, 2009, 2013a). This has also been confirmed for college students as well as for middle-aged adults (e.g., George, 1991) and the elderly (e.g., Blais et al., 1989).

#### **5.1.1.2 Trends in psychological wellbeing**

Sociodemographic variability for Psychological Wellbeing (PWB)<sup>25</sup> has also been documented (Clarke et al., 2000; Keyes & Ryff, 1998; Marmot et al., 1997; Ryff & Singer, 1996; Ryff & Keyes, 1995; Ryff, 1989). Initial cross-sectional findings with national-representative samples (Ryff, 1989) described an increase for the PWB components of *Autonomy* and *Environmental Mastery* and a decrease for *Purpose in life* and *Personal growth*, from young adulthood to old age. *Positive Relations* and *Self-acceptance* showed little variance overall, but tended to grow for women. These patterns have been echoed in further studies with community samples (Ryff, 1991) and a US national representative adult sample (Ryff & Keyes, 1995), although the scales varied in length across studies. Other cross-sectional studies also reinforced a decrease for *Purpose in life* with age (Clarke, Marshall, Ryff, & Rosenthal, 2000). Being married and employed are positively associated with *Purpose in life* and men score higher than women but only in young adulthood (Ryff, Keyes, et al., 2004).

Of course, as discussed for EWB, these patterns can represent true aging changes or cohort differences, although they have been reinforced by subsequent longitudinal

<sup>&</sup>lt;sup>25</sup> An expanded description of PWB is found in section 2.4.2.

research with large samples (Hill & Weston, 2019; Springer et al., 2011). Negotiating transitions (e.g. care-taking or moving to a new community) has been linked to this decline (Kling et al., 1997; Kwan et al., 2003).

The decline for *Personal growth* with age is reported similarly by men and women (Ryff et al., 2004). Interestingly, however, despite the decrease with age for a US national representative sample, no differences were found in a sub-sample of Chicago/NY adults (Ryff et al., 2004). Importantly, despite the tendency for older adults to report lower *Personal growth*, levels of *Personal growth* appear to remain relatively high when compared to other elements of PWB (Bauer & Park, 2010; Ryff & Singer, 2008).

It has been suggested that this age decline in what have been considered the two most eudaimonic aspects of wellbeing (*Purpose in life* and *Personal growth*) may reflect societal challenges in the provision to older adults of meaningful roles and opportunities (Ryff, 2019b; Ryff & Singer, 2008). Life expectancy rose on average by almost thirty years in the past century (Martin et al., 2010). Ryff (2017) argues how the main institutions in society (family, work, education, etc.) may not yet have adapted to the growing number of older adults who are physically and cognitively heathier than prior generations at the same age. This can translate in reduced opportunities for engagement and self-realization, an issue also described by Riley et al. (1994) as a "structural lag" or mismatch between people's lives and social structures.

For the two components showing increase with age, further noteworthy trends have been observed. In the case of *Environmental mastery*, Ryff et al. (2004) highlight a main effect of sex, with men scoring higher. Being married and employed were also found to predict *Environmental mastery*. Interestingly, in a community sample, the effect for age found for the US national sample was not replicated. For *Autonomy*, a sex-age interaction was observed, with disadvantage for young women (Ryff et al., 2004). Ryff & Singer (1996) noted age increments, but only from young adulthood to midlife.

*Self-acceptance* tends to show little age variation (Ryff & Keyes, 1995; Ryff & Singer, 2006). Despite a higher score for men in an US representative sample, no sex differences were found in a subsample of Chicago/NY participants. Also, an age by sex interaction revealed these differences tend to occur only among the oldest respondents (Ryff et al., 2004).

Finally, for *Positive relations*, age trends are varied (Ryff & Singer, 1996) between no age differences to incremental patterns. It has been suggested that individuals in midlife tend to score lower than young adults, and the elderly higher than middle-aged adults (Ryff et al., 2004). Women tend to score higher than men (Ryff & Singer, 1995). For all other PWB components, women report similar levels to men (Keyes & Ryff, 1998, 1999; Marmot et al., 1997; Ryff, 1989; Ryff & Keyes, 1995; Ryff & Singer, 2008).

Looking at overall PWB and not specific components, Westehof and Keyes (2010) and Venning et al. (2011) found a negative relationship with age. Venning et al. (2011) also found overall PWB to be higher for women.

When looking at correlations between components, *Self-acceptance, Environmental mastery, Purpose in life*, and *Personal growth* tend to be highly correlated (Clarke et al., 2001; Abbott et al., 2006; Burns & Machin, 2009; Ryff, 1989; Ryff & Keyes, 1995).

#### 5.1.1.3 Trends in social wellbeing

The MIDUS also provided the first epidemiological data on social wellbeing in the US. Keyes (1998) 's initial study suggested that all components tend to increase with age except for *Social coherence* that tends to decrease. Furthermore, the relationship between age and social wellbeing seems to be nonlinear for some components: while *Social acceptance* and *Social integration* increase linearly with age, the increase for *Social actualization* and *Social contribution* decelerates with each year of life (Keyes & Shapiro, 2004).

There is also evidence that a good percentage of adults in the US between the ages of 25 and 74 maintain moderate to high levels of social wellbeing (Keyes, & Shapiro, 2004). In a national-representative sample, nearly 40 percent scored in the upper tertile on at least three of the social wellbeing scales (Keyes & Shapiro, 2004). Adults aged 65 to 74 scored in the highest tertile significantly less frequently than did 25 to 34-year olds (Keyes & Shapiro, 2004). However, in a sample of 1340 Dutch adults aged between 18 and 87 years, Westerhof and Keyes (2010) found no association between age and social wellbeing, a result also echoed by Venning et al. (2011). Overall, there is mixed evidence and the relationship age–social wellbeing is still equivocal.

Sex has been flagged as a predictor of overall social wellbeing, with advantage for men (Keyes & Shapiro, 2004). However, when looking at each dimension separately, women report higher *Social acceptance* than men, men report higher *Social coherence* than women and for *Social actualization* and *Social contribution*, Keyes and Shapiro (2004) note that effects are drastically reduced when including multivariate models. For *Social integration* there is no effect of sex.

Finally, in a recent study including 2732 participants and three waves of assessment, Joshanloo et al. (2018) concluded that the functioning aspects of wellbeing (psychological and social wellbeing) are more stable than hedonic wellbeing (EWB).

Overall, the research-base on epidemiological trends for *positive mental health* is characterized by mixed evidence. Having reviewed this, we now outline the aims for the current study.

#### 5.1.2 Aims for the current study

The present study aims to investigate musicians' *positive mental health* and in so doing, answer the first research question set for this thesis: Research Question 1 (RQ1) (see Chapter 4, section 4.2): What is the *positive mental health* profile of an international sample of professional and student musicians?

The five sub-questions outlined in Chapter 4 encapsule the five aims for this study:

- 1) assess multidimensional *positive mental health* encompassing emotional, psychological and social wellbeing domains (RQ 1.1);
- describe the prevalence of flourishing, moderate mental health and languishing in a sample of musicians following Keyes (2002)'s classification (RQ 1.2);
- 3) explore the relation between musicians' *positive mental health* and demographic variables (age and sex) (RQ 1.3);
- compare musicians' results to indicators from national-level general population samples (RQ 1.4);
- compare musicians' results with results from other performing artists (RQ 1.5).
  The following section outlines how we set out to fulfill these aims.

## 5.2 Method

This section presents the method for Study 1. It starts by describing the scales used, their purpose, psychometric properties and the justification for their inclusion. This is followed by a description of the participants. The section ends with considerations on data preparation and analyses.

#### **5.2.1 Instruments**

The core wellbeing profile of this project makes use of *The Mental Health Continuum – Long Form (MHC-LF)* for the assessment of *positive mental health*. An additional measure was added for the assessment of life satisfaction: the *Satisfaction with Life Scale* (SWLS).

#### 5.2.1.1 The Mental Health Continuum Long-form (MHC-LF)

#### 5.2.1.1.1 Purpose

To allow for an empirical assessment of *Positive mental health*, and with the aim of covering emotional, psychological and social wellbeing in a single measure, Keyes (2002) developed the *Mental Health Continuum* (MHC) scale. The questionnaire is theoretically-driven and borrows from previously existing instruments, used in a large number of studies and validated across a wide variety of samples (Gallagher et al., 2009; Keyes et al., 2002; Ryff, 1989). Two versions are available: the Mental Health Continuum - Long Form (MHC-LF) and the Mental Health Continuum - Short Form (MHC-SF). The first version of the MHC (MHC-LF), used in the landmark *Midlife in the United States Study (MIDUS)* (Keyes, 2002), was chosen for the current project. It consists of forty Likert-scale questions organized into three sets of items corresponding to the three components of Keyes's model: 1) emotional wellbeing, 2) psychological wellbeing and 3) social wellbeing. Emotional wellbeing is assessed with six items measuring positive affect and one item measuring one's life evaluation, based respectively on Bradburn's (1969) *Affect* 

*Balance Scale* and Cantril's *Self-anchoring Scale*<sup>26</sup> (Cantril, 1965). Psychological wellbeing is assessed through the lens of Ryff's model (1989) using the *Psychological Wellbeing Scales* (Ryff & Keyes, 1995). Social wellbeing is assessed following Keyes's model (1998) of social wellbeing<sup>27</sup>. Besides allowing to measure each component of *Positive mental health*, the MHC was also designed to provide a DSM-type categorical diagnosis of mental health as described in Chapter 2 (Keyes, 2002, 2003, 2005).

#### 5.2.1.1.2 Scoring and Psychometrics

For emotional wellbeing assessment, the individual indicates how much of the time during the past 30 days they experienced six symptoms (e.g. "cheerful", "satisfied") on a scale from 1 (all of the time) to 5 (none of the time). For life evaluation, participants are asked to rate their "life overall these days" on a scale from 0 (worst possible life overall) to 10 (best possible life overall). For psychological wellbeing, each of the six subscales consists of three items rated from 1 (agree strongly) to 7 (disagree strongly) with the mid-point at 4 (neither agree nor disagree). There is a balance of positive and negative items. Items include, for example, "I am good at managing the responsibilities of daily life" (environmental mastery) or "maintaining close relationships has been difficult and frustrating for me" (positive relations). Similarly, for social wellbeing, there are three items per each of the five sub-scales, with ratings ranging from 1 (agree strongly) to 7 (disagree strongly) with the mid-point at 4 (neither agree nor disagree), also with a balance of positive and negative items. Items include, for example, "my daily activities do not create anything worthwhile for my community" (social contribution) or "I have something valuable to give the world" (social contribution)<sup>28</sup> (see Appendix 5.1 for the full scale).

For the categorical diagnosis of *positive mental health*, Keyes (2002) proposes that all scales should be divided by the number of items and standardized. Tertiles are then

<sup>&</sup>lt;sup>26</sup> A landmark effort in wellbeing measurement was Cantril's "Self-Anchoring Striving Scale" (Cantril, 1965), through incorporating the construct of satisfaction. He focused on the individual's aspirations and the degree to which they are satisfied, by reference to one's own standards rather than imposed external criteria (Cantril, 1965). The "Self-Anchoring Striving Scale" asks the individual to consider the best and worst possible life they could live, and to judge how good their life is by comparison to that best and worst possible life.

<sup>&</sup>lt;sup>27</sup> Ryff (1989) and Keyes (1998)'s models are described in Chapter 2.

<sup>&</sup>lt;sup>28</sup> Positive affect items and some of the psychological and social wellbeing items are reverse coded.

computed. Participants scoring in the upper tertiles in one of the two emotional wellbeing scales and six of the eleven scales for psychological and social wellbeing are considered to be flourishing. Conversely, people who show low scores (i.e., 'never' or 'once or twice' during the past month) on at least one component of hedonic wellbeing and low levels on at least six measures of positive functioning are diagnosed with languishing. Participants who do not qualify for flourishing nor languishing are classified for moderate mental health.

Overall internal consistency estimates for the three components of the measure (emotional, psychological, and social wellbeing) have been reported as good (> .80, Keyes, 2005). The individual psychological wellbeing and social wellbeing sub-scales have yielded moderate to low alphas (from .70 to .40) (Keyes, 2005; Keyes & Ryff, 1998).

Despite some conflicting evidence (Jovanović, 2015), there has been confirmatory support for the three-factor structure, including in large samples of adults (Gallagher et al., 2009; Robitschek & Keyes, 2009) and adolescents (Keyes, 2005, 2009) as well as in studies with international samples including American, European and South African (Keyes, 2018; Lamers et al., 2011). The MHC has also demonstrated good validity and test-retest reliability (Jovanović, 2015; Keyes, 2007, 2009a, 2009b; Lamers et al., 2011).

#### 5.2.1.1.3 Justification for inclusion

The MHC-LF has been chosen for the current project for four reasons. First, to date, it stands as the only theoretically driven and psychometrically sound measure that fits the definition of mental health expounded in our literature review (see Chapter 2). It offers great potential for the current project as not only does it allow for a profile across different components of wellbeing, it facilitates the understanding of *positive mental health* as a syndrome of positive functioning symptoms, through is diagnostic classification procedure. Second, there is literature available with comparative indicators from general population that allow contextualization of musicians' scores. Thirdly, the scale has an administration time of approximately 15 minutes, appropriate for online assessment and finally, it has demonstrated overall good psychometric performance across a wide variety of samples.

#### 5.2.1.2 The Satisfaction With Life Scale (SWLS)

#### 5.2.1.2.1 Purpose

The *Satisfaction With Life Scale* (SWLS) is a brief, multi-item measure of life satisfaction developed by Ed Diener and colleagues (Diener et al., 1985; Pavot & Diener, 1993a). As reviewed in Chapter 2, life satisfaction (LS) is the cognitive-judgemental component of the construct of subjective wellbeing (SWB) and is considered to be its central and most stable component (Diener, 1984; Diener et al., 1999; Diener, 2000; Diener & Diener, 1995; Pavot & Diener, 2008).

The SWLS scale was designed as a measure for a judgement of an individual's sense of satisfaction with their life as a whole, also referred to as global satisfaction. Making a life satisfaction judgement in the context of this view, is considered to depend on a comparison between the individual's current status of life and their self-defined expectations of how they would like their life to be. Here, life satisfaction is considered "a global assessment of a person's quality of life according to their chosen criteria" (Shin & Johnson, 1978, p.478). These criteria may be built primarily upon self-defined ideals, ideals imprinted by others, or in relation to one's own past experiences (Pavot & Diener, 1993a, 2008). Diener (1984) suggests that a rigorous assessment of life satisfaction should acknowledge that for different people, different values can be ascribed to different domains of satisfaction (e.g. health, finances, marriage). There is evidence that people from different developmental stages (Cantor & Blanton, 1996) and cultures (Diener & Lucas, 2000; Diener & Suh, 2000b) for example, give different weights to different domains when making a global judgment about their lives. On those grounds, rather than summing partial assessments on satisfaction with specific domains, a life satisfaction index needs to target an evaluation of life as a whole, allowing the respondent to integrate whichever domains they choose, and weight them however they want to. Pavot & Diener (2008, 1993a) highlight how a measure imposing summing of dimensional scores or other weightings would fail to assess this subjective valence of evaluation standards. This proposal has received empirical validation. The effects of domain satisfactions on global life satisfaction account for around 50% of its variance (Campbell, 1976; Hart, 1999; Near et al., 1984).

The SWLS consists of 5-items (e.g. "In most ways my life is close to my ideal"), requiring a self-report rating on a 7-point Likert scale, anchored by the extent of agreement with each statement (7 = strongly agree to 1 = strongly disagree) (see Appendix 5.2 for the full scale); it takes around two minutes to complete and can be self-administered or administered by an interviewer. Since its publication (Diener et al., 1985), it has been heavily used across a very wide range of groups (Pavot & Diener, 2008) and translated into over 25 languages. The existing data suggests that the SWLS is moderately free from bias with respect to culture (Pavot & Diener, 1993a), holding therefore potential as a cross-cultural index of life satisfaction with international samples such as the one in the current study. It has been consistently highlighted as one of the leading scales in the assessment of life satisfaction (Vassar, 2008; Oishi, 2006).

#### 5.2.1.2.2 Scoring and Psychometrics

The responses to the SWLS's five items are summed to create a total score that can range from 5 to 35, with 20 representing the neutral point on the scale, high scores indicating that a person perceives areas of their life they consider important to be going well and low scores indicating the opposite. Diener (2006) has proposed the following interpretative ranges for the general population: 5-9 *Extremely dissatisfied with life*; 10-14 *Dissatisfied with life*; 15-19 *Slightly below average in life satisfaction*; 20-24 *Average life satisfaction*; 25-29 *High satisfaction with life* and 30-35 *Very highly satisfied with life*.

The SWLS has demonstrated extremely good psychometric characteristics (Pavot & Diener, 1993a). The initial validation study reported an internal consistency coefficient of .87 (Diener et al., 1985). A meta-analysis (Vassar, 2008) integrating sixty-two articles reported a mean Cronbach's alpha of .78. Given that the calculation of Cronbach's alpha is based on the number of scale items, scales with a larger number of items tend to yield higher alpha estimates. With 5 items only, the moderate internal consistency estimates for the SWLS are therefore extremely acceptable. Test-rest correlation coefficients have also been reported as high or moderate with .84 (Pavot et al., 1991) and .80 (Steger et al., 2006) for a 1-month interval, .82 over a two-month period (Diener, 1985), and .54 after 4 years (Magnus et al., 1993). Importantly, the SWLS has shown sufficient sensitivity to detect change in life satisfaction during the course of clinical interventions (Pavot & Diener, 1993a) which has granted the scale a prominent role in quality of life assessments across health psychology studies.

Additionally, the SWLS has consistently yielded different results among groups that would be expected to differ in quality of life (such as prisoners, for example), and has also evidenced change in the predicted direction in relation to major life events (Vitaliano et al., 1991).

Since its introduction, the SWLS has been found to represent a single factor. This has been supported by both exploratory and confirmatory factor analytic studies across a variety of cultural contexts, including versions of the scale in different languages (Arrindell et al., 1999; Arrindell et al., 1991; Atienza et al., 2016; Blais et al., 1989; Diener et al., 1985; Neto, 1993; Pavot et al., 1991; Pavot & Diener, 1993b; Shevlin & Bunting, 1994). In the initial validation (Diener et al., 1985), the factor accounted for 66% of the variance in the scale. Correlations between individual items and the total score have ranged from .57 to .66 across studies. When comparing factor loadings for each item and correlations item-total score, the first item ("in most ways my life is close to my ideal") consistently shows the strongest association, and the last item "(if I could live my life over, I would change almost nothing") the weakest (Pavot & Diener, 1993a).

Adding to consistency, stability and the representation of a single factor, the SWLS has also revealed strong construct validity across studies, from both convergent and discriminant analyses (Beuningen, 2012; Diener et al., 1985; Pavot & Diener, 1993a) Lucas et al., 1996; Pavot et al., 1991). Importantly, the SWLS tends to correlate weakly with both positive and negative affect scales, with correlation values ranging from .26 to .47 (Pavot & Diener, 1993a). This indicates that the SWLS taps a different dimension of SWB and strengthens the theoretical formulations that support the idea of life satisfaction and affective wellbeing as different constructs.

#### 5.2.1.2.3 Justification for Inclusion

Life satisfaction is a component of subjective wellbeing that is distinct from positive affect and predominantly cognitive (Diener et al., 1999). As Diener and Seligman (2004) suggest, a comprehensive assessment needs to include measures of the different SWB concepts. There is evidence that life satisfaction can explain incremental variance beyond measures of the affective components of SWB (Lucas et al., 1996). Furthermore, not only is life satisfaction a separate aspect of subjective wellbeing, it also has been shown to correlate differently with wellbeing predictors (Pavot & Diener, 1993a). A rigorous assessment of SWB needs therefore to measure life satisfaction apart from affect and this was the starting point for the decision of ensuring life satisfaction was measured in this study.

The *Dual continua model* includes life satisfaction as part of its Emotional Wellbeing component. However, the MHC–LF scale assesses it making use of a single-item on an evaluation of one's life, without a mention to satisfaction. The item asks participants the following: "Using a scale from 0 to 10 where 0 means 'the worst possible life overall' and 10 means 'the best possible life overall', how would you rate your life overall these days?". This represents a cognitive judgement about the quality of one's life that is different from satisfaction with it. Furthermore, given the potential bias from transient factors, there has been a strong case for preferring multi-item measures in wellbeing literature (Pavot & Diener, 1993b; Schwarz & Clore, 1983; Schwarz & Strack, 1991). For this reason, adding to the decision to include a separate assessment of life-satisfaction in the present study, there was an additional concern towards ensuring the use of a multi-item scale. The SWLS's multi-item structure allied with its strong psychometric properties were the key criteria for its inclusion. Additionally, this scale is brief and it can be incorporated into an assessment battery with minimal cost in time, preventing respondent burden, which was a major ethical concern.

Finally, the theoretical underpinnings of life satisfaction as a subjective construct, assuming individuals decide their own criteria for inclusion in their evaluative judgment also guided the choice for the SWLS. This subjective approach enables the use of the measure across a wide variety of groups without compromising direct comparison (Diener et al., 1985; Pavot & Diener, 1993b). This is particularly relevant for a study with such a diverse sample of musicians.

#### **5.2.2 Participants**

The recruitment strategy for the overall project is described in Chapter 4. A total of 1338 participated in the study, with 1240 (92.7%) providing a full dataset, of which thirteen reported their main source of activity to be outside of the performing arts leading to a final total of 1227 participants. Of these, 1014 (82.6%) were musicians, 130 (10.6%) were dancers and 83 (8.8%) were actors<sup>29</sup>.

Of the 1014 musicians, 77.7% of participants were professionals (n = 788) and 22.3% were music students (n = 226). 61.2% (n = 621) of the musician participants were women and 38.8% (n = 393) were men. The bias towards women was particularly strong among students, with women representing 73.5% of student respondents (n = 166); among professionals, 57.7% (n = 455) were women and 42.3% (n = 333) were men. Ages ranged from 18 to 87, with a median of 35 and a mean of M = 37.6 years (SD = 14.4) (Figure 5.1).



Figure 5.1. Musicians' age distribution by sex (n = 1014)

<sup>&</sup>lt;sup>29</sup> Data from the samples of dancers and actors will be presented in sections 5.3.4 and 5.3.5.

Participants represented 62 nationalities, across the five continents. Europe accounted for 62% of the sample, followed by North America (22.5%), South America (7%), Oceania (5.2%), Asia (1.8%) and Africa (1.5%). British (n = 180) and American (n = 176) were the most represented nationalities, with 18.4% and 18% respectively. The full distributions per nationality by country and continent are presented in Appendix 5.3 and 5.4.

For geographical region of work/study, Europe was also the most represented, with 56%, followed by North America (26%), South America (4%), Oceania (5%), Asia (2%) and Africa (1%). In addition, 6% of the sample reported working internationally and not being based in one country alone. Forty-eight countries of work/study were represented. The UK and Ireland were the most represented accounting for 22.1% of the overall sample together, followed by North America with 18.1%. Full distributions regarding geographical area of work/study are presented in Appendix 5.5 and 5.6.

Participants were asked to describe their main activity as the one in which they spend the majority of a typical week engaging with. Among the professionals, 44.3% (n = 350) were primarily engaged in performance, 36.8% (n = 289) in teaching, 13.1% (n = 103) in composing and 5.8% in conducting (n = 46). Table 5.1 presents the frequencies per category of activity reported. The 289 teachers were spread across different teaching levels, with the large majority accumulating more than one level; 95 (34.4%) taught in specialist music schools (HE conservatoires and Junior conservatoires); 138 taught at high school level, 128 middle school and 113 up to elementary school.

ACTIVITY		FREQUENCY	PERCENT
	Soloist	89	8.8
	Ensemble – orchestra	138	13.6
PERFORMER	Ensemble – choir	26	2.6
	Ensemble – chamber instrumental	46	4.5
	Ensemble – other	51	5
COMPOSER		103	10.2
CONDUCTOR		46	4.5
TEACHER		289	28.5
STUDENT		226	22.3
TOTAL		1014	100

Table 5.1. Frequencies and percentages per principal area of musical activity

Table 5.2 presents the distribution per area of primary specialism. 979 musicians provided this information. Strings were the most represented group with n = 217 (21.4%), followed by keyboard (piano, harpsichord and organ) with n = 189 (18.6%).

	FREQUENCY	PERCENT
Strings	217	21.4
Woodwinds	176	17.4
Brass	67	6.6
Keyboard	189	18.6
Voice	147	14.5
Percussion	10	1
Composition	103	10
Conducting	46	4.5
Music Theory, Ear Training	24	2.4
Missing	35	3.5
TOTAL	1014	100

Table 5.2. Frequencies and percentages per category of primary specialism

From the professional musicians in the sample (n = 788), 780 provided further details about their professional situation: 33.8% (n = 266) reported being on a contract, 62.9% working on a freelance basis (n = 491), 2.3% (n = 18) in a situation where both contract and

freelance work described their typical week and 0.6% (n = 5) retired. The frequency table for professional situation is presented in Appendix 5.7.

Table 5.3 presents the frequencies per category of years of professional experience. The majority of professionals (n = 310, 39.3%) had over 20 years of professional activity in music.

YEARS	FREQUENCY	PERCENT
fewer than 5 years	76	9.6
5-10 years	140	17.8
10-15 years	132	16.8
15-20 years	130	16.5
more than 20 years	310	39.3
TOTAL	788	100

Table 5.3. Frequencies and percentages by category of years of professional experience in music

91.9% of the sample reported working in classical music as their primary genre, followed by jazz (3%), pop (2.6%) and other genres accounting for 2.5% of the sample. The full frequency distribution for musical genre is presented in Appendix 5.8.

Despite having music as their main activity on a typical week of work, 22% of the sample (n = 223) reported maintaining a parallel career. The most represented professional occupations were arts administration (13.9%) and teaching (outside music) (9.9%). The full frequency distribution per parallel career areas is presented in Appendix 5.9.

#### 5.2.3 Data preparation and analyses

Only full datasets with regards to the variables of interest for the study were used: MHC-LF (all items), SWLS (all items), sex, age, area of activity in music, and status as professional or student. The two optional questions made to professionals, concerning freelance/contract status and engagement or not in a parallel profession, led to several missing data points as not all musicians chose to answer. These two variables were not included in the analyses. Continent of work/study was taken out of further analyses due to the highly unbalanced sample sizes across groups. No univariate outliers were removed given that they did not affect any assumptions.

Guided by the study aims, analyses were performed for the total musician sample, for music professionals and students separately, and for the three performing arts. Descriptive analyses were run for all variables of interest: sex, age, type of musical activity, MHC scores for each sub-scale and SWLS scores. The Pearson correlation coefficient was used to examine the bivariate correlations among the continuous variables. Internal reliability of each scale was determined using Cronbach's alpha. For group comparisons, t-tests, analyses of variance (ANOVA) and analyses of co-variance (ANCOVA) were used, as appropriate. Welch tests were used when homogeneity of variances could not be assumed. Analyses with age were initially fit as general additive models (GAM) to check for non-linear relationships.

For the *positive mental health* categorization, the procedure outlined by Keyes (2002;2005) was followed: all scales were divided by the number of constituent items and standardized. Tertiles were then computed for each scale. Participants with scores in the upper tertiles of one of the two emotional wellbeing scales and six of the 11 psychological and social wellbeing scales were classified as "Flourishing". If participants scored in the lower tertiles of one of the two emotional wellbeing scales and six of the 11 scales of psychological and social wellbeing they were classified as "Languishing". Participants who were neither flourishing nor languishing were classified as moderately mentally healthy.

Cross-tabulation analysis was used to assess the association of level of mental health within other categorical variables, with chi-square tests assessing statistical independence. Z-score tests of proportions were used to compare musicians' percentages across MHC categories with those reported in other studies. With the predictors age, sex and type of musical activity, logistic regression analyses were run to check the predictive capacity of each variable for being classified as "Flourishing".

ANCOVAs were run to compare the MHC scores between musicians and other performing artists, while controlling for the effects of confounders (sex and age, as relevant). Independent-sample t-tests using summary values were used to compare MHC scores with results reported for the general population.

SPSS v.25 (IBM Corp., Armonk, NY, United States), R Studio (RCore Team, 2020) and Jamovi v.1.6 (2021) were used for analyses.

#### **5.3 Results**

This section is organized following the five aims of this study. First, we present a profile of multidimensional *positive mental health* encompassing emotional, psychological and social wellbeing, in a sample including professional and student musicians (RQ 1.1). We then clarify the prevalence of flourishing, moderate mental health and languishing, according to Keyes (2002)'s classification (RQ 1.2). This is followed by the exploration of the relation between musicians' *positive mental health* and demographic variables (RQ 1.3). Finally, we compare musicians' scores with general population indicators available in literature (RQ 1.4) and with results from the sample of other performing artists (actors and dancers) recruited for this study (RQ 1.5).

#### 5.3.1 Positive mental health profile for the total sample

The first aim for this study was to assess multidimensional *positive mental health* encompassing emotional, psychological and social wellbeing domains (RQ 1.1). Table 5.4 presents the correlation matrix as well as means and standard deviations for all MHC-LF subscales.
	1	2	3	4	5	6	7	8	9	10	11	12	13
1. P. Affect													
2. L. Evaluation	.659**												
3. Autonomy	.228**	.163**											
4. E. Mastery	.584**	.495**	.322**										
5. P. Relations	.433**	.394**	.182**	.372**									
6. Purpose	.147**	.209**	.089**	.148**	.235**								
7. P. Growth	.305**	.301**	.202**	.306**	.315**	.368**							
8. Self-Accept.	.596**	.548**	.316**	.591**	.449**	.251**	.423**						
9. S. Integrat.	.277**	.392**	.087**	.398**	.480**	.153**	.262**	.402**					
10. S. Actualiz.	.319**	.292**	.054**	.343**	.238**	.112**	.213**	.309**	.339**				
11. S. Accept.	.277**	.272**	.062**	.244**	.275**	.056**	.191**	.265**	.410**	.490**			
12. S. Contrib.	.364**	.373**	.325**	.383**	.367**	.213**	.350**	.452**	.388**	.267**	.236**		
13. S. Coher.	.336**	.277**	.270**	.411**	.347**	.184**	.250**	.338**	.431**	.371**	.266**	.456**	1
		•	•	•	•	•	•	•	•	•	•	•	
Mean	19.01	7.05	15.96	14.54	15.83	16.39	18.81	16.08	14.53	11.94	12.93	17.44	13.78
SD	4.39	1.67	3.57	3.69	3.85	3.27	2.39	3.69	4.54	4.12	3.43	3.24	3.66

Table 5.4. Correlation matrix, means and standard deviations for the 13 MHC-LF sub-scales

\*\*. Correlation is significant at the 0.01 level (2-tailed)

Table 5.5 presents internal consistency indicators for each of the MHC-LF subscales. Following Nunally (1978)'s criteria, all three alphas are acceptable.

Sub-scale	Cronbach α
Emotional Wellbeing <sup>30</sup>	.897
Psychological Wellbeing	.714
Social Wellbeing	.741

Another aim for this study was to explore the relation between musicians' positive mental health and demographic variables (age and sex). In what follows, these trends are presented for each component.

<sup>&</sup>lt;sup>30</sup> Positive affect items.

### 5.3.1.1 Emotional wellbeing

The mean score for the *Positive affect* subscale was M = 19.01 (±4.29, SE = .13), with a median of 19 and scores ranging from 6 to 30 (the scale range). The median was 19, meaning 50% of observations were above the mid-point of the scale (18). The interquartile range was 7.

The mean score for the *Life evaluation* item (scale range: 0-10) was M = 7.05 (±1.67, SE = .05), with a median of 7 and scores observed across the entire scale, ranging from 0 to 10. 75% of observations were above 6 and the interquartile range was 2. The sub-scale of *Positive affect* and the item for *Life evaluation* were moderately correlated (r(1012) = .651, p<.01). Item inter-correlations ranged from .515 to .786 (see Appendix 5.10 for correlation matrix).

#### 5.3.1.1.1 Sex

An independent-samples t-test revealed significant differences in the mean score for *Positive affect* between men and women, with men scoring higher ( $M = 19.4, \pm 4.35$ ) than women ( $M = 18.8, \pm 4.23$ ), t(1012) = 2.32, p = .021. However, the effect size was extremely small (d = -.03) therefore these can be considered trivial. When controlling for the effect of age, these loose significance (p = .087). No differences between sexes were observed for life evaluation.

### 5.3.1.1.2 Age

The correlations between the two components of emotional wellbeing and age were very small, with .167 for *Positive affect* and .149 for *Life evaluation*, both significant at p<.01. A linearity test allowed us to discard the possibilities of non-linear relationships. Using a categorization of age, a one-way independent ANOVA revealed there were significant differences across groups for *Positive affect* (F(3, 946) = 9.42, *p* = .001), although with a very small effect ( $n^2$  = .03). Post hoc comparisons using the Tukey HSD test indicated that the mean scores for musicians aged 45 to 64 (*M* = 19.8, *SD* = 3.93) and 65 and over (*M*=21.04, *SD* 

= 4.1) were both significantly higher than the mean scores for the 18 to 24 age group (M = 18.42, SD = 4.35) and 25 to 44 year-olds (M = 18.62, SD = 4.28).

For *Positive affect*, there was a significant interaction effect between sex and age (F(3, 942) = 3.35, p = .018,  $r^2 = .04$ ) (Figure 5.2), as assessed by a factorial ANOVA. Post-hoc analyses using Tukey's HSD revealed that women in the older group (Over 65) scored significantly higher than the first age group (18-24).



Figure 5.2 Positive affect across age categories for male and female musicians

For *Life evaluation*, no interaction effect between age and sex was found. A one-way ANOVA revealed significant differences across age categories (F(3, 946) = 8.26, p = .001) with a very small effect size ( $\eta^2 = .03$ ). Post hoc comparisons using the Tukey HSD test indicated that the over 65 group (M = 7.94, SD = 1.63) scored significantly higher on *Life evaluation* than all the other groups (18-24: M = 6.72, 1.64; 24-44: M = 7.06, 1.62; 45-64: M = 7.17; 1.66) and the 45-64 group scored significantly higher than the 18-24 group.

When controlling for the effects of sex and age through analyses of co-variance, there were no significant differences for *Positive affect* nor for *Life evaluation* across the different areas of musical activity (p = .123 and p = .546, respectively).

## 5.3.1.2 Psychological wellbeing

The correlation matrix for the *Psychological wellbeing* sub-scales is presented in Appendix 5.11. Figure 5.3 presents means and standard errors for the six components for the entire sample (professional and student musicians). All sub-scales range from 3-21.



Figure 5.3. Mean scores and standard errors for the six *Psychological wellbeing* components for the total musician sample (n=1014)

For all subscales, musicians scored on average well above the mid-point of the scale (12). The mean score for *Self-acceptance* was  $M = 16.08 (\pm 3.7, SE = .11)$ , with a median of 17, a mode of 18 and scores ranging across all possible scale values, from 3 to 21. 75% of observations were above 14 and the interquartile range was 5.

The mean score for the *Environmental mastery* subscale was M = 14.54 (±3.68, *SE* =.12), with a median and mode of 15 and scores ranging from 3 to 21.75% of observations were above 12 and the interquartile range was 5.

The mean score for *Positive relations* was M = 15.83 (±3.85, *SE* =.12), with a median of 16 and scores ranging from 3 to 21.75% of observations were above 13 and the interquartile range was 6.

*Personal growth* was the subscale with the highest scores, with a mean of M = 18.8 (± 2.39, *SE* = .07), a median of 20 and scores ranging from 3 to 21.75% of observations were above 17 and the interquartile range was 3. The third quartile for this subscale was the maximum score of 21 and the mode was also the maximum value of the scale (21).

The mean for *Autonomy* was M = 15.96 (±3.56, SE = .11), with a median of 16 and scores ranging from 4 to 21. The value for the first quartile was 14 and the interquartile range was 5. The mode for this component was also the maximum value of the scale (21).

Finally, *Purpose in life* had a mean score of  $M = 16.39 (\pm 3.27, SE = .10)$ , with a median of 17, mode of 16 and scores ranging from 4 to 21.75% of observations were above 14 and the interquartile range was 5.

As with the original validation study for the measure, all sub-scales correlated positively. The coefficients were generally small. Moderate correlations were observed between *Self-acceptance* and *Environmental mastery*, *Self-acceptance* and *Positive relations* and *Self-acceptance* and *Personal growth* (correlation matrix is presented in Table 5.4).

Table 5.6 presents reliability indicators of each of the PWB sub-scales.

Sub-scale	Cronbach α
Self-acceptance	.68
Environmental Mastery	.59
Positive Relations	.57
Personal Growth	.43
Autonomy	.64
Purpose in Life	.31

Table 5.6. Cronbach's  $\alpha$  for the five *Psychological wellbeing* sub-scales

Alphas were moderate or weak (Nunally, 1978; Nunally & Bernstein, 1998), with values in line with previous studies (e.g. Toyama et al., 2020; Weston et al., 2020; Ryff et al., 2004).

### 5.3.1.2.1 Sex

Independent-sample t-tests revealed that men scored significantly higher than women on *Environmental mastery* ( $M = 15.07, \pm 3.58 \text{ vs } M = 14.21, \pm 3.71, t(1012) = 3.47, p = .001, d = .23$ ) and *Autonomy* ( $M = 16.4, \pm 3.44 \text{ vs } M = 15.63, \pm 3.61, t(1012) = 3.61, p = .001, d = .23$ ). Results from the GLM testing when controlling for the effect of age, showed that only the difference for *Environmental mastery* remained significant (p = .003).

Women's scores on *Personal growth* ( $M = 19, \pm 2.29$ ), were significantly higher than men's ( $M = 18.5, \pm 2.51$ ; t(1012) = 3.29, p < .001, d = .21) and the difference remained significant when controlling for the effect of age (p = .004).

When controlling for the effect of age, women also scored significantly higher for *Positive relations* ( $M = 15.99, \pm 3.79$ ) than men ( $M = 15.59, \pm 3.93$ ), (F(1,1011) = 5.04, p = .025,  $\eta^2 = .005$ ). There were no significant differences between men and women for the remaining sub-scales. No interaction effects between sex and age were significant.

All correlations between age and the *Psychological wellbeing* sub-scale scores were weak (all significant at p <.01): r(1012) = .245 for *Autonomy*, r(1012) = .160 for *Environmental mastery*, r(1012) = .143 for *Positive relations*, r(1012) = .112 for *Purpose in life*, r(1012) = .066 for *Positive growth* and r(1012) = .103 for *Self-acceptance*. Linearity analyses allowed to discard the possibility of non-linear relationships.

Age categorization revealed further trends. Figures 5.4 to 5.9 display mean scores and standard errors for the *Psychological wellbeing* sub-scales across age categories.





For *Self-acceptance*, homogeneity of variances could not be assumed and a Welsh ANOVA was used to investigate differences across age categories. Musicians over 65 scored significantly higher ( $M = 17.84, \pm 2.97$ ) than musicians in the remaining categories: 18-24 ( $M = 15.63, \pm 4$ ); 25-44 ( $M = 16, \pm 3.61$ ) and 45=64 ( $M = 16.25, \pm 3.48$ ) (F (3, 216.453) = 6.94, p <.001,  $\eta^2 = .02$ ).

Figure 5.5 displays mean scores and standard errors for *Environmental mastery* across age categories.



Figure 5.5 Mean scores and standard errors for *Environmental mastery* by age category

An ANOVA with Tukey post hoc tests showed significant differences across age categories, with musicians in the two oldest groups ( $M = 15.2, \pm 3.67$  for 45-64 and M = 15.96,  $\pm 3.4$  for Over 65) scoring significantly higher than both of the younger groups (M = 13.8,  $\pm 3.74$  for 18-24 and  $M = 14.3, \pm 3.62$  for 25-44) (F (3, 1010) = 8.29, p <.001,  $\eta^2 = .03$ ). The effect remains when controlling for the effect of sex.

Figure 5.6 displays mean scores and standard errors for *Positive relations* across age categories.



Figure 5.6 Mean scores and standard errors for *Positive relations* by age category

A one-way ANOVA revealed significant differences for *Positive relations* across age categories F(3, 1010) = 8.19, p < .001,  $\eta^2 = .03$ ). Tukey post hoc tests showed that musicians in the age range of 18 to 25 scored significantly lower ( $M = 14.7, \pm 4.1$ ) than the remaining groups (25-44:  $M = 15.99, \pm 3.71$ ; 45-64:  $M = 15.96, \pm 3.93$ ; Over 65:  $M = 17.38, \pm 3.24$ ). These differences remained when controlling for the effect of sex (p < .001).

Figure 5.7 displays mean scores and standard errors for *Personal growth* across age categories.



Figure 5.7 Mean scores and standard errors for Personal growth by age category

The mean for *Personal growth* was consistently very high for all age groups and there were no significant differences across age categories (p=.158). This remained when controlling for the effect of sex (p=.198).

Figure 5.8 displays mean scores and standard errors for *Autonomy* across age categories.



Figure 5.8 Mean scores and standard errors for Autonomy by age category

A one-way ANOVA revealed significant differences for *Autonomy* across age categories F(3, 1010) = 22.22, p < .001,  $\eta^2 = .3$ ). Tukey post hoc tests showed that musicians in the age ranges of 18-24 (M = 14.72, ±3.65) and 25-44 (M = 15.85, ±3.51) scored significantly lower than the two older age groups (45-64: M = 17.14, ±3.32; Over 65: M = 17.71, ±2.85). Furthermore, the two youngest categories also differed significantly. All differences remained when controlling for the effect of sex (p < .001).

Figure 5.9 displays mean scores and standard errors for *Purpose in life* across age categories.



Figure 5.9 Mean scores and standard errors for *Purpose in life* by age category

A one-way ANOVA revealed no significant differences for *Purpose in life* across age categories (p=.061). Figure 5.10 shows all PWB sub-scale trends across age categories.



Figure 5.10 Mean scores for the six *Psychological wellbeing* sub-scales across age categories

### 5.3.1.2.3 Type of musical activity

When comparing results for the professional sub-sample across the different types of activity (teacher, performer, composer and conductor), no differences were found for the sub-scales of *Self-acceptance, Positive relations, Personal growth* and *Autonomy*, when controlling for the effects of sex and age through analyses of co-variance. There were significant differences with a small effect across groups for *Environment mastery* (*F*(3, 1010) = 4.92, p = .002,  $\eta^2 = .02$ ), with composers ( $M = 13.85, \pm 4.35$ ) scoring lower than performers ( $M = 14.95, \pm 3.71$ ) and conductors ( $M = 15.84, \pm 2.55$ ). There were significant differences with a small effect for *Purpose in life* across the professional groups (*F*(3, 186.642) = 5.64, p = .001,  $\eta^2 = .02$ ), with composers ( $M = 17.23, \pm 3.31$ ) scoring higher than performers ( $M = 15.92, \pm 3.46$ ) and teachers ( $M = 16.24, \pm 3.14$ ).

### 5.3.1.3 Social wellbeing

The correlation matrix for the *Social wellbeing* sub-scales is presented in Appendix 5.12. Figure 5.11 presents the mean scores and standard errors for the five sub-scales, for the full musician sample (professionals and students). Each sub-scale ranges from 3 to 21.



Figure 5.11. Mean scores and standard errors for the five Social wellbeing sub-scales

With the exception of *Social-actualization*, musicians' mean scores were above the midpoint of the scale (12) for all sub-scales.

The *Social contribution* subscale had the highest mean score of M = 17.44 (±3.23, SE = .10), a median of 18, with scores ranging from 5 to 21.75% of observations were above 15 and the interquartile range was 5. The mode was the highest value of the scale (21).

The mean score for the *Social integration* subscale was M = 14.53 (±4.53, *SE* =.14), with a median of 15, a mode of 19 and scores ranging from 3 to 21.75% of observations were above 11 and the interquartile range was 7.

Social actualization was the subscale with the lowest scores, with a mean of M = 11.94 (±4.12, SE = .13). The median and mode were 12 and scores ranged from 3 to 21. The value for the first quartile was 9, below the mid-point of the scale. However, 50% of the observations were above 12 and the interquartile range was 6.

The mean score for the *Social acceptance* subscale was M = 12.93 (±3.43, SE = .14), with a median and mode of 13 and scores ranging from 3 to 21.75% of observations were above 11 and the interquartile range was 4.

Finally, the mean score for the *Social coherence* subscale was M = 13.78 (±3.65, SE = .11), with a median of 14, mode of 15 and scores ranging from 3 to 21.75% of observations were above 11 and the interquartile range was 5.

Table 5.7 presents Cronbach's alpha for the five sub-scales, used as the internal consistency indicator.

Sub-scale	Cronbach $\alpha$
Social Contribution	.75
Social Integration	.82
Social Actualization	.70
Social Acceptance	.48
Social Coherence	.46

Table 5.7 Cronbach's  $\alpha$  for the five Social wellbeing sub-scales

As with the scale development study (Keyes, 1998), *Social coherence* was the subscale with lowest reliability and *Social integration* with the highest. The weak alphas for *Social acceptance* and *Social coherence* echo previous findings (e.g. Joshanloo et al., 2018; Keyes, 1998; Shapiro & Keyes, 2008).

Also similarly to the original study, all sub-scales correlated positively (significance at p<.01). Most correlations were weak. Moderate correlations were observed between *Social coherence* and *Social contribution* (r = .456), *Social-acceptance* and *Social integration* (r = .410), and between *Social acceptance* and *Social acceptance* and *Social social contribution* (r = .319) (see Table 5.4 for correlation matrix).

#### 5.3.1.3.1 Sex

An independent-samples t-test revealed no significant differences between men and women for mean scores of *Social integration*, *Social acceptance*, *Social contribution* and *Social actualization*.

There were significant differences between men ( $M = 14.2, \pm 3.71$ ) and women ( $M = 13.47, \pm 3.59$ ) in mean scores for *Social coherence* (t(1012) = 3.1, p = .002, d = .2). The difference stands when controlling for the effect of age (p < .001). The interaction between sex and age was not significant for any of the sub-scales.

### 5.3.1.3.2. Age

All correlations between age and the *Social wellbeing* sub-scales were extremely weak: r(1012) = .274 for *Social contribution*, r(1012) = .212 for *Social coherence*, r(1012) = .134 for *Social acceptance*, r(1012) = .110 for *Social integration* (significant at p < .01). The correlation between age and *Social actualization* was not significant. Similarly to *Psychological wellbeing*, linearity tests allowed to discard the possibility for non-linear relationships. Age categorization allowed to observe further trends. Figures 5.11 to 5.15 display mean scores and standard errors for all sub-scales across age categories.



Figure 5.12. Mean scores and standard errors for *Social contribution* by age category

A Welch's ANOVA revealed significant differences in *Social contribution* across age categories (F(3, 223.34) = 30.979, p < .001,  $\eta^2 = .103$ ) with Games-Howell post hoc tests clarifying that this was driven by the younger musicians (18-25), who scored significantly lower (M = 15.61, 3.65) than the remaining groups (25-44: M = 17.7, 2.92; 45-64: M = 18.27, 2.83; Over 65: M = 19.02, 2.1), with the "22-44" group also scoring lower than the "over 65".

Figure 5.13 displays mean scores and standard errors for *Social integration* across age categories.



Figure 5.13. Mean scores and standard errors for *Social integration* by age category

A Welch's ANOVA revealed significant differences across age categories *F* (3, 215.07) = 7.791, *p* <.001,  $\eta^2$  =.02). Tukey post hoc tests clarified that older musicians in the age range of Over 65 scored significantly higher (*M* = 16.78, 3.59), than the musicians in the 18-25 group (*M* = 14.02, 4.50).

Figure 5.14 displays mean scores and standard errors for *Social acceptance* across age categories.



Figure 5.14. Mean scores and standard errors for Social acceptance by age category

A one-way ANOVA revealed significant differences for *Social acceptance* across age groups (F(3, 1010) = 6.737, p < .001,  $\eta^2 = .02$ ). Tukey post hoc tests showed that the older group of musicians in the age range of Over 65 scored significantly higher (M = 14.75, 3.28) than all the remaining groups (18-24: M = 12.48, 3.4; 25-44: M = 12.8, 3.48; 45-64: M = 13.17, 3.37).

Figure 5.15 displays mean scores and standard errors for *Social actualization* across age categories.



Figure 5.15. Mean scores and standard errors for *Social actualization* by age category

A one-way ANOVA revealed no significant differences for *Social actualization* across age categories (p = .101).

Figure 5.16 displays mean scores and standard errors for *Social coherence* across age categories.



Figure 5.16. Mean scores and standard errors for *Social coherence* by age category

There were significant differences across age categories as revealed by a one-way ANOVA (F(3, 1010) = 18.947, p < .001,  $\eta^2 = .06$ ). Tukey post hoc tests showed that musicians in the age range of 18-25 scored significantly lower on *Social coherence* (M = 12.36, 3.49) than the remaining groups (25-44: M = 13.77, 3.56; 45-64: M = 14.85, 3.61 Over 65: M = 14.88, 3.61). Furthermore, the mean for the 25-44 group was also significantly lower in comparison with the 45-64 group. The differences remained when controlling for the effect of sex (p < .001).

### 5.3.1.3.3 Type of musical activity

When comparing results for the professional sub-sample across the different types of activity (teacher, performer, composer and conductor), no differences were found between groups for the sub-scales of *Social integration*, *Social acceptance, Social actualization* and *Social contribution* when controlling for the effects of sex and age in an ANCOVA. There were significant differences for *Social coherence* across groups (*F*(3, 1010) = 3.98, *p* = .008,  $\eta^2$  = .01), with teachers (*M* = 14.59, ±3.72) scoring higher than performers (*M* = 13.64, ±3.47).

## 5.3.2 Comparison between professionals and students

### 5.3.2.1 Emotional wellbeing

Figures 5.17 and 5.18 show the mean scores and standard errors for the *Emotional wellbeing* sub-scales for professional musicians (n=788) and music students (n=226).



Figure 5.17. Mean scores and standard errors for *Positive affect*, for professional musicians and music students



Figure 5.18. Mean scores and standard errors for *Life evaluation*, for professional musicians and music students

The GLM analysis controlling for the effects of sex and age as covariates revealed professional musicians ( $M = 19.09, \pm 4.28$ ) scored significantly higher than students ( $M = 18.7, \pm 4.29$ ) for *Positive affect* ( $F(1, 1012) = 4.121, p = .043, \eta^2 = .0001$ ) although with a negligible effect size. No differences were found for *Life evaluation* (p = .202).

## 5.3.2.2 Psychological wellbeing

Figure 5.19 shows mean scores and standard errors for the six sub-scales of *Psychological wellbeing*, for the sub-samples of professional musicians (n = 788) and music students (n = 226).



Figure 5.19. Mean scores and standard errors for the six sub-scales of *Psychological wellbeing*, for professional musicians and music students

There were significant differences between the two groups across all components except *Self-acceptance* that were, however, driven by age. When controlling for the effects of age, no significant differences were found between the two groups for all sub-scales of *Psychological wellbeing (p-values* between .946 and .092).

## 5.3.2.3 Social wellbeing

Figure 5.20 shows mean scores for the six sub-scales of *Social wellbeing*, for the sub-samples of professional musicians (n=788) and music students (n=226).



Figure 5.20. Mean scores and standard errors for the five sub-scales of *Social wellbeing*, for professional musicians and music students

Analyses of co-variance were run for each sub-scale, controlling for the effects of sex and age. The analyses revealed higher scores for students for *Social integration* (M = 14.66, ± 4.2 vs M = 14.54 , ± 4.62; (F(1, 1012) = 6.842, p = .009, d = .15) and *Social acceptance* (M = 12.91 , ±3.48; vs M = 12.91, ±3.27; (F(1, 1012) = 8.686, p = .003, d =.18) and higher scores for professionals for *Social contribution* (M = 17.85, ± 2.99 vs M = 15.99, ± 3.62 ; (F(1, 1012) = 12.580, p <.001, d =.24).

## **5.3.2.4 Categorical results**

The second aim of this study was to describe the prevalence of flourishing, moderate mental health and languishing in a sample of musicians (RQ 1.2). Following Keyes (2002)'s classification criteria (see section *5.2.3 Data preparation and analyses*), musicians' scores were computed into categories. Here we compare these results with the results from a nationally representative sample from the U.S., part of the MIDUS study, used by Keyes (2002) when first introducing the MHC-LF.

## 5.3.3 Positive mental health classification

Figure 5.21 presents the percentages across the three categories of *positive mental health* for musicians and for a national representative sample (U.S.), as published by Keyes (2002).



Figure 5.21. Percentages across the three categories of *positive mental health* for musicians and general population (from Keyes, 2002)

A significantly higher proportion of musicians classified as Flourishing, when compared to the proportion reported for a national representative sample in Keyes (2002) (.254 compared to .181) (z = 5.0374, p < .001, *Cohen's* h = .18). The proportion for musicians in the Moderate Mental Health category was significantly inferior to that of the MIDUS study (.537 compared with .651, z = -6.4823, p < .001, *Cohen's* h = .23). Finally, the proportion of musicians classifying as Languishing was significantly higher when compared to the proportion reported in Keyes (2002) (z = 2.8824, p < .01, *Cohen's* h = .1).

Sex and mental health status were not significantly associated ( $\chi^2(6) = 3.320$ , p = .190).

With the predictors age, sex and type of musical activity, logistic regression analyses were run to ascertain the predictive capacity of each variable towards being classified as 'Flourishing'. The logistic regression suggested only a very small effect for age, with the odds of musicians being classified as flourishing increasing by 1.028 for each year of age (CI: 1.017 - 1.038, *LRT* = 34.37, *df* = 1, *p*<.001), when all other variables were held constant.

Cross-tabulation analyses of the status on positive mental health (flourishing, languishing and moderate mental health) with the four age categories indicated a significant association ( $\chi^2(6) = 65.69$ , p < .001). The proportion of musicians in the 'Flourishing' category was higher in the 'over 65' group when compared to all the other age categories (18-24: z = 4.92, p < .001; 25-44: z = 4.38, p < .001; 45-64: 2.9834, p < .001) and higher for '45-64' year-olds when comparing with '18-24' (z = 2.85, p < .01). For the 'Moderate Mental Health' category, musicians in the 25-44 age group were more represented than both the '18-24' and 'over 65' groups (z = 3.53, p < .001 and z = 2.12, p < .05, respectively). Finally, for the Languishing category, there was a greater proportion of musicians in the '18-24' age category when compared with '25-44' (z = 4.61, p < .001), '45-64' (z = 4.65, p < .001) and 'over 65' (z = 4.79, p < .001). Furthermore, musicians over 65 were less represented in the Languishing category, when compared with all other age groups (z = 3.08, p < .01 for '25-44' and z = 2.71, p < .01 for '45-64').

Type of musical activity and mental health status were significantly associated ( $\chi^2(6)$  = 14.63, *p* = .023). For the different types of activity there were similar proportions for the 'Flourishing' category. The proportion of teachers in the 'Languishing' category was significantly lower than that of performers (*z* = -2.81, *p* <.01) and composers (*z* = -3.01, *p* 

<.01), but no different from conductors. There was also a lower proportion of conductors 'Languishing' than of performers (z = -2.56, p < .05) and composers (z = -2.47, p < .05). Proportions for the 'Moderate Mental Health' category were not significantly different across categories of musical activity.

Figure 5.22 shows the percentages across categories of *positive mental health* for professional musicians and music students.



Figure 5.22. Percentages across the three categories of *positive mental health* for professional musicians and music students

A chi-square test for equality of proportions revealed a significant difference between professionals and students only for the 'Languishing' category ( $\chi^2 = 8.87$ , p = .012) indicating that the proportion of students in this category was higher<sup>31</sup>.

We were interested to also compare just the professional group's results with Keyes (2002)'s results. Z-tests of proportions revealed no difference between the two proportions for 'Languishing' (p = .183), a higher proportion of professional musicians in the 'Flourishing' category (z = 5.15, p<.001) and a lower proportion of musicians in the 'Moderate Mental Health' category when compared with national-representative US sample (z = -5.28, p<.001).

<sup>&</sup>lt;sup>31</sup> Tests were adjusted using the Bonferroni correction to account for multiple comparisons.

Furthermore, to place music students' results in context with another student sample, we compared our findings with the results reported in Figueira et al., (2014) who used the MHC-LF with a group of university students from the social and biological sciences (n = 465). Z-tests of proportions revealed no differences between the two groups in the proportions for 'Languishing' (p = .872), 'Flourishing' (p = .230) and 'Moderate Mental Health' (p = .418).

# 5.3.4 Comparison with other performing arts

Another aim of this study was to place musicians' scores in the context of other performing artists' indicators (dancers and actors).

# 5.3.4.1 Emotional wellbeing

Figures 5.23 and 5.24 show the mean scores and standard errors for *Positive affect* (range: 0-30) and *Life evaluation* (range 0-10) for musicians, dancers and actors.



Figure 5.23 Positive affect mean scores and standard errors for musicians, dancers and actors



Figure 5.24. *Life evaluation* mean scores and standard errors for musicians, dancers and actors

Analyses of co-variance controlling for the effects of sex and age showed no significant differences across the three groups for both *Positive affect* (p =.28) and *Life evaluation* (p =.07).

# 5.3.4.2 Psychological wellbeing

Figure 5.25 shows mean scores and standard errors for the *Psychological wellbeing* sub-scales for musicians, dancers and actors.



Figure 5.25. *Psychological wellbeing* mean scores and standard errors for musicians, dancers and actors

Analyses of co-variance revealed no significant differences across the three performing arts groups for any of the *Psychological wellbeing* scales, when controlling for the effects of sex and age (p-values between .77 and .35).

# 5.3.4.3 Social wellbeing

Figure 5.26 shows mean scores and standard errors for the *Social wellbeing* subscales for musicians, dancers and actors.



Figure 5.26. Social wellbeing mean scores and standard errors for musicians, dancers and actors

There were no significant differences between musicians, dancers and actors for any of the social wellbeing scales, when controlling for the effects of sex and age, as determined by analyses of co-variance (p values between .98 and .28).

# 5.3.4.4 Positive mental health classification

Figure 5.27 displays percentages for musicians (n=1014) and other performing artists (actors and dancers, total n=213) for the three categories of *positive mental health*.



Figure 5.27. Percentages for the three categories of *positive mental health* for musicians and other performing artists

Z-tests for proportions revealed no significant differences in the proportions for Flourishing (p = .0784), Moderate Mental Health (p = .9601) and Languishing (p = .0536) between musicians (n = 1014) and other performing artists (n = 213).

Overall, musicians do not seem to hold significantly different MHC profile trends when compared to other performing artists.

### 5.3.5 Satisfaction with Life Scale

The mean for *Satisfaction with life* for the total musician sample, as measured by the SWLS, was M=22.98, ±6.64, with a median of 24, a mode of 25 and a range between 5 to 35 (the entire scale range). 75% of participants scored above 19. 48% of participants scored within what Diener (2006) has defined as "high" (25 to 29) or "very high" (30-35) satisfaction with life, with a further 18.9% within an "average score" (20-24).

Internal consistency was very good, with a Cronbach's alpha of  $\alpha$  = .865, very close to the scale norms (Kobau et al., 2010). The highest rated item was "I am satisfied with my life" (M=4.83, ± 1.59). See Appendix 5.13 for full item descriptive statistics.

The pattern of correlations observed with PWB also replicated previous studies (e.g. Ryff & Keyes, 1995; Keyes, Shmotkin & Ryff, 2002), with the strongest associations between

Satisfaction with life and Self-acceptance (r(1012) = .689, p<.01) and Environmental mastery (r(1012) = .537, p<.01), and the remaining coefficients showing weak to moderate associations.

There were no significant differences in *Satisfaction with life* between men and women (p = .695). The correlation with age was extremely weak (r(1012) = .115, p<.001). A linearity test allowed to discard the possibility of non-linear relationships. A one-way ANOVA revealed significant differences across age categories (F(3, 918) = 4.98, p<.01,  $\eta^2 = .016$ ). Tukey post-hoc tests showed that the group of over 65 (M = 26.43, ±5.49) scored significantly higher than the remaining groups (18-24: M = 22.7, ±6.68; 25-44: M = 22.62, ±6.57; 45-64: M = 23.2, ± 6.63).

Figure 5.28 shows mean scores and standard errors for *Satisfaction with life* for the different areas of musical activity, for the professional sub-sample (n = 788).



Figure 5.28. Means and standard errors for Satisfaction with life by type of professional activity

There were no significant differences in *Satisfaction with life* scores across the different groups of activity (p = .897), as measured by a one-way ANOVA.

Analyses of co-variance revealed no significant differences in *Satisfaction with life* when comparing musicians' scores with those of dancers and actors, when controlling for the effects of sex and age (p = .853).

# 5.4 Discussion

This study aimed to investigate *positive mental health* in an international sample of professional and student musicians (RQ1). As such, it was focused on drawing a profile of emotional, psychological and social wellbeing (RQ1.1); establishing the prevalence of flourishing, moderate mental health and languishing following Keyes (2002)'s classification (RQ1.2); exploring the relation between the three wellbeing components and key demographic variables (RQ1.3); and placing musicians' scores in the context of results obtained for general population groups in previous studies (RQ 1.4), as well as within other performing arts (RQ 1.5). This study represents the first systematic investigation to date on the construct of positive mental health with musicians. In this section, we discuss the study's results, its limitations and some of the new questions it raises for further research.

### 5.4.1 Musicians' positive mental health profile

Overall, our study evidences a markedly positive profile for musicians across all assessed dimensions. Musicians' results are either in line with previous research with other populations, or better. The results of this study, therefore, challenge the somewhat pervasive stereotype that musicians' wellbeing tends to be low and that the music profession's stresses and strains necessarily translate into disadvantaged mental health profiles.

### 5.4.1.1 Emotional wellbeing

Musicians' results for *Emotional wellbeing* were high: 75% of participants scored above the mid-point of the scale both for *Positive affect* and *Life evaluation*. The SWLS brought further validity to our life satisfaction assessment, with a multi-item investigation reinforcing yet again a very favourable profile, with a total of 66.9% of musicians scoring anywhere from very high to average *Satisfaction with life*. The figures for *Satisfaction with life* echo recent research among elite musicians (Habe et al., 2019).

As with previous research (Diener et al., 1999), there were no differences between sexes and no clear pattern for age, with only a very small advantage for older musicians, particularly women. The high levels of EWB were transversal to all areas of musical activity.

Given that it is the first time the MHC has been used with a sample of musicians, there is no prior literature to compare our data to. However, our results echo previous accounts of high hedonic wellbeing for musicians using other measures. As mentioned in Chapter 3, using the PERMA profiler, Ascenso et al. (2018) found a high score for *Positive Emotion* in an international sample of 601 professional musicians, with a mean well above the mid-point of the scale, a result also found to be higher than that reported for a general population group. Qualitative inquiry allowed exploration of the subjective experience of *Positive Emotion* of musicians engaged primarily in performance, composition or conducting, leading to the conclusion that all types of professional musical activity were perceived by participants as offering opportunities to frequently experience positive emotions through music (Ascenso et al., 2017).

When looking at music students' scores, these were similarly high, with a mean also largely above the mid-point of the scale. This echoes previous research with a music student sample, which despite using a different and very brief measure<sup>32</sup>, also found high scores for its hedonic items (Araújo et al., 2017).

For *Life evaluation*, participants from both student and professional sub-groups reported on average moderate to high levels, a trend also observed in previous research both

<sup>&</sup>lt;sup>32</sup> Short Warwick Edinburgh Mental Wellbeing Scale (SWEMWBS) (2008)

with college students as well as with samples of adults in midlife and older adults (Blais et al., 1989; Diener & Diener, 1996; George, 1991; Pavot & Diener, 1993a). This pattern was obtained both with the LS item from the MHC and with the SWLS.

As expected, *Positive affect* and *Life evaluation* were only moderately or weakly correlated to most eudaimonic dimensions, resonating previous findings (e.g. Keyes et al., 2002; Ryff & Keyes, 1995) and clearly represent two distinct components of EWB. Our data also replicates the pattern found by Ryff and Keyes (1995) when integrating findings from several studies: two of the PWB subscales stood out with a moderate association with EWB components (*Environmental mastery* and *Self-acceptance*).

Overall, our results allow for a strong assertion that musicians' levels of EWB are good.

### 5.4.1.2 Psychological wellbeing

The results for PWB were equally encouraging, with musicians scoring well above the mid-point of the scale for all dimensions in a pattern of high medians and, for some scales, extremely high modes.

### 5.4.1.2.1 Personal growth and Purpose in life

One of the most surprising results was the unique pattern of *Personal growth* and *Purpose in life*. Previous reports from multiple cross-sectional national studies and longitudinal accounts, highlight how these two sub-scales tend to both have a similar pattern in declining with age, bringing to light later life vulnerabilities (Clarke et al., 2000; Ryff, 1989, 1991, 2017; Springer et al., 2011). In our sample these two sub-scales did indeed behave similarly to one another, but their means remained constant for the different age groups who represent different life stages and are challenged by different life transitions. They were the only scales of the six to show a pattern of no differences across age groups.

Of particular note are the results on *Personal growth*, especially as it stands as the closest component to Aristotle's original 'eudaimonia' (Ryff, 1989). Not only were musicians'

mean scores extremely high (M = 18.81), the mode for the distribution was 21 (the maximum value in the sub-scale) and the median was 20. This depicts a very high sense of continued development, of perceiving the self as expanding and of realizing one's potential, reflecting greater self-knowledge and effectiveness over time (Ryff & Keyes, 1995).

Two points of caution are worth noting. First, our study was focused on students and professionals, and therefore there was not a large representation of participants 'over 65' (n= 52) which remained a rather simplified and broad category. Future research will allow a more refined categorization of older groups. Nevertheless, the midlife decline in growth and the challenge around the transition to old age that are usually reported do not seem to characterize musicians' experience. Secondly, we are very cautious when comparing our results with other studies, in particular with the substantial number of outputs that came out of the MIDUS databases. Not only is our sample an international one, it covers only one occupational group and we used self-report as our assessment modality, which was not the case for all of MIDUS's studies. It is nevertheless striking that musicians' pattern seems to be different from the usual reports.

As discussed, it has been suggested that the decline in *Personal growth* and *Purpose in life* usually observed in general population samples can represent a structural lag, where society has not accompanied the increase in lifespan years, failing to provide adequate structures to promote flourishing for older adults (Riley et al., 1994). It seems from the results of this study that an extensive engagement in music-making may offer crucial opportunities in this regard, allowing musicians to continue to nurture meaningful roles and self-realization in older age. Ryff (2019a) has recently suggested that extensive engagement in the arts may indeed translate in enhanced personal growth and purpose, noting that this remains hitherto unaddressed empirically.

Interestingly, not only were the levels of *Personal growth* similarly high across age groups, they were very high very early on. The mean for the 18-24 group was 18.89 (range 3 - 21). What needs clarifying, therefore, is if musicians tend to generally experience higher *Personal growth* across all ages more than other groups, or if the advantage is mainly for the older groups while the youngest hold comparable means with peers. Previous studies seem to suggest the latter (e.g. Horton & Shweder, 2004).

The positive impact of music engagement in old age by non-musicians is well documented, with evidenced of enhanced engagement, a sense of fulfillment and a dynamic pursuing of new goals (e.g. Perkins & Williamon, 2013). It seems from the results of our study that these roles of music for this age group may extend to professionals as well.

A crucial element in understanding the high sense of *Personal growth* in our sample, is the importance of music-making in musician's identity construction. As flagged in previous research (Ascenso et al., 2016), musicians highlight their work as a key definer of the self. In the words of a composer: "there is just not a way I could work on something else because this is who I am in my essence" (p.71). This close connection between music-making and one's true sense of self may underpin the role of expressing oneself musically in fulfilling one's potential. Looking particularly at older musicians, it is not unusual to see high levels of musical engagement well beyond the retirement age and until the end of a musician's life (e.g. Mohr & Schaeffer, 1996). Fasbender et al. (2014) highlight how retirees who perceive their aging process as personal growth are more likely to work after they retire and to view work as a potential source for flourishing. This may be the case with musicians. Music has also been reported as a source of generativity (Ascenso, 2016) which has been highlighted in previous research to be a key factor for personal growth through late adulthood (Villar, 2012).

*Purpose in life* was the second highest sub-scale of PWB in our study. The overall mean was high (16.39) and, crucially, the value for the first quartile (14) was well above the midpoint of the scale. As with *Personal growth*, there were no differences in *Purpose in life* across the various age groups. In the context of Ryff (1989) and Keyes (2002)'s models, this component refers to the degree to which someone "has goals in life and a sense of directedness; feels there is meaning to present and past life; holds beliefs that give life purpose; and has aims and objectives for living" (Ryff, 1989, p. 1072). This perception serves to organize one's sense of self and provide direction (McKnight & Kashdan, 2009). The high result in this component is not surprising, given the previous accounts on musicians' high sense of meaning (Ascenso et al., 2018; Ascenso et al., 2016) and sense of calling (Dobrow, 2013). As is the case with *Personal growth*, the pattern of the data we obtained legitimizes
us to ask further questions on the potential of the arts for opportunities for flourishing, especially later in life.

Overall, the *Purpose in life* scale raises psychometric concerns that need addressing in further research. This scale showed weak or very weak correlations with the remaining PWB sub-scales (ranging from .089 with *Autonomy* to .368 with *Personal growth*) and was the sub-scale with the lowest alpha ( $\alpha$  = .31, which in psychometrics literature is considered unacceptable; Nunnally & Bernstein, 1994). Very similar alphas for this sub-scale have been reported by Ryff and Keyes (1995) ( $\alpha$  = .33), Keyes et al. (2002) ( $\alpha$  = .35) and Weston et al. (2021) (in a three-wave study:  $\alpha$  = .30;  $\alpha$  = .32;  $\alpha$  = .35). Despite these trends, the predictive validity of the *Purpose in life* scale has been demonstrated, and crucially, it is largely similar at both the item or the composite analysis (Hill & Turiano, 2014). Overall, our results raise questions on the validity of these sets of items to adequately assess musicians' experience of a sense of *Purpose in life*.

#### 5.4.1.2.2 Positive relations

For *Positive relations*, musicians' results are also high. This was not entirely surprising given the existing research using the PERMA model discussed in Chapter 3 (Ascenso et al., 2018), where the element of *Relationships* was also highly endorsed by professional musicians, and crucially, was on average significantly higher than general population scores. Qualitative accounts have also revealed relational variables are at the core of meaning-making through music, even for musicians working primarily alone, with peak musical moments and the shared nature of music-making as central ingredients in this domain (Ascenso et al., 2016).

Female musicians scored higher than male, echoing previous research (Ryff et al., 2004). In terms of age, there seems to be a disadvantage for younger musicians (18-24). Crucially, however, the 18-24 group still exhibited high scores. The scale items refer to life in general, not to relationships tied to one's work or study. However, given the centrality of academic peers in this phase of life (Erikson, 1959), it will be useful to explore if the relational dynamics of a conservatoire training can help explain this pattern. While a prolific

space for connectedness, music-making in a conservatoire setting is particularly prone to competitiveness and may be associated with idiosyncratic peer pressure, social comparison and judgement (Dobson, 2010), which can affect younger musicians' overall perception of the quality of their relational experiences. Further research will allow to clarify this.

#### 5.4.1.2.3 Self-acceptance

The subscale of *Self-acceptance* was also well endorsed by musicians, with a mean score of 16.08 and crucially, a mode of 18 and a median of 17 (range 3 to 21). This means that a large majority of musicians in our sample reported a positive attitude towards the self and one's personal life history, acknowledging and accepting positive and negative aspects of self and feeling positive about one's past life. Given the vulnerability associated with constantly expressing oneself through music and in a sector built upon evaluation, competition and comparison with peers that can potentiate self-doubt (Dobson, 2010), along with high rates of perfectionistic concerns (Stoeber & Eismann, 2007), this result in indeed very encouraging. Musicians seem to maintain a good level of acceptance of the self, despite these known challenges. This is especially promising if we consider the centrality one's musical identity takes on musicians' general construction of their sense of self-worth (Dobson, 2010; Ascenso et al., 2016).

Given that the participants in this study were all, to some degree, part of the music sector either professionally or academically, they have arguably already successfully endured some scrutiny on their musical abilities. The question remains on whether they are already particularly capable of maintaining a positive outlook on the self, despite the pressures, and therefore were able to adapt to the sector, or if they developed this with time. Given the self-selection bias inherent to our type of sampling strategy, we did not have a chance to assess musicians who dropped out of the career. It would, therefore, be particularly valuable to investigate *Self-acceptance* with such a group.

As reviewed in section 5.3.1.2, there is mixed evidence on the demographic patterns for this sub-scale. Previous research has described trends of little variance or a slight advantage for older male adults in a national sample, with no differences in a community sample (Ryff et al., 2004). In our sample, musicians over 65 scored higher than the remaining groups and no sex differences or sex-age interactions were found. Developmentally, a key challenge of the over 65 stage of life is to experience a positive outlook into one's life (Erikson, 1982). Our results suggest that musicians negotiate this developmental task well.

#### 5.4.1.2.4 Environmental mastery

*Environmental mastery* was the component of PWB with the lowest mean score. Musicians scored, nevertheless, on average above the mid-point of the scale and crucially, the first quartile was also above that mid-point, meaning that the large majority of musicians still endorsed this scale at a good level. It seems that, of all the processes that constitute the experience of PWB, the one that musicians most struggle to fully experience is the ability to choose and/or create environments suitable to them. Our results also show this seems to be harder for women musicians. The age pattern evidenced in our data mirrors previous research in showing lower levels for young adulthood (Ryff & Keyes, 1995).

In her formulation of this element, Ryff (1989) emphasizes the importance of searching for or creating a context that is suitable to one's needs, values and capacities, displaying a sense of "competence in managing the environment, and controlling a complex array of external activities" (p. 1072). This represents a fit between the musician's external and internal worlds. The items of this sub-scale address life as a whole and not specifically one's professional/academic activities. Nevertheless, given the time-consuming nature of music-making, this result raises questions on how the music sector can contribute to providing environments and tasks that can fully potentiate musicians' sense of mastery. A very curious finding was that composers scored significantly lower in *Environmental mastery* than performers and conductors. Despite still maintaining a mean score well above the midpoint of the scale, it seems that this group perceives less ability in managing the environment and controlling a complex array of activities and may have greater difficulty in changing or improving their surrounding context than the other two groups. This brings important questions regarding composers' routines and work-patterns and about the match between what is required of them and their own artistic needs and values. Further qualitative inquiry will allow to understand the experience of *Environmental mastery* for composers, in context.

Importantly, *Environmental mastery* and *Self-acceptance* remain the highest correlation within the PWB components (r(1012) = .591), echoing previous accounts (Ryff & Keyes 1995). This highlights the relationship between having a positive look on one self and one's abilities, and having the capacity to shape the environment to fully express these. This can be particularly key for musicians, as discussed, where the sense of self is so tied to one's professional identity (Dobrow, 2013; Dobson, 2010). It has been suggested that there may be a potential conceptual overlap between *Environmental mastery* and *Selfacceptance*, justifying a 5-factor model for PWB instead of 6 factors (Springer et al., 2011). However, our study joins others when confirming that there are distinct age profiles for the two elements, despite the limitations a cross-sectional assessment brings in this regard. To fully clarify this pattern it would be valuable to include older groups of musicians and adopt a longitudinal approach.

## 5.4.1.2.5 Autonomy

Finally, for the element of *Autonomy*, the mean score was also well above the midpoint of the scale. A crucial result for this sub-scale was that the mode was the same as the highest value of the scale (21) and 75% of the sample scored higher than 14. This depicts that the majority of musicians in our sample perceive themselves as well able to resist social pressures, regulate behavior from within and self-evaluate by personal standards, evidencing high self-determination, independence, self-regulation and internal locus of control (Ryff, 1989). Crucially, this ability is reported transversally across all the represented types of musical activity. As with previous research (Ryff et al., 2004), the results for *Autonomy* and *Environmental mastery* show a similar pattern across the age groups, with higher scores among older adults. In our sample, middle aged adults also scored higher than the younger groups.

Looking at *Environmental mastery* and *Autonomy* together, it is interesting that while the former represented the lowest of all sub-scales with a relatively low median and mode (15), *Autonomy* yielded much higher results. While musicians perceive a high ability to resist pressures and regulate one's behaviour, at the same time there may be challenges associated with engaging with the environment in a way that can best meets one's needs and values. Interestingly, composers didn't score below any of the groups in *Autonomy*.

Recent research has argued on how the classical music sector may suffer from a rigid system of norms that place damaging constraints on musicians (Leech-Wilkinson, 2020). This body of work highlights the policing of artistry and creativity by music critics, educators and key stakeholders towards a conformity into rigid, and rather irrational, rules regarding interpretation and composition. While in other art forms the creative exploration of a classic piece of art is welcome (e.g. a Shakespeare text), in classical music there is evidence of a tendency to encourage conformity to what a piece is 'supposed to sound like', with little margin for exploration. Interestingly, previous qualitative research with professionals has revealed a similar theme, as musicians voiced how the business around music-making often limits the expression of true artistic identity, requiring conformity and routine (Ascenso et al. 2016), echoing trends from cross-sectional research as well (Parasuraman & Purohit, 2000; Levine, 1999). As a middle-aged member of a highly acclaimed opera chorus expressed, "I miss music in the midst of the mechanical production of music. Sometimes at rehearsal break, I run hysterically to my dressing room to just do music. Repetition ends up killing everything" (p.73). She further explained that she found in parallel chamber ensembles created by her, the forum to express herself musically in a way that fully met her needs and values. Is seems therefore, that classical music as a so-called 'creative industry' can do more to promote opportunities for expression of creativity. The results of this study call for a phenomenological investigation on how musicians make sense of *Environmental* mastery and Autonomy in their contexts of music-making. Arguably, strategies like the one mentioned above may be harder to engage with by younger musicians, who are known to struggle with professional uncertainly at the start of the career, often having to compromise artistic integrity and values for the sake of a job in music (Ascenso et al., 2017; Kwon et al., 2018).

#### 5.4.1.3 Social wellbeing

For all *Social wellbeing* components, musicians' average score was above the midpoint of the scale.

#### 5.4.1.3.1 Social contribution

The element that stood out as the highest rated component was *Social contribution*. Surprisingly, the mode for *Social contribution* was the highest value of the scale (21) and the median was 18. This means that musicians tend to have a very high sense of their social value and a perception that they bring a meaningful contribution to society. This sense is equally high for men and women and slightly lower for younger musicians (18-24). It is also experienced more by professionals than students. This component is not assessed specifically in relation to one's professional activity, but work and study are central for one's perception of *Social contribution* (Keyes, 1998). Together with the very high sense of *Personal growth*, this result is very encouraging as it reveals that a career in music not only enables a platform towards continued development, expansion and realization of one's potential, while also at the same time offers the individual a strong sense of bringing value to society. From the results of our study, this is the case for all types of musical activity included.

Even though the direction of causality is unclear, *Social contribution* has been linked with civic engagement in previous research (Putnam, 2000). With the growing number of initiatives in the classical music sector towards community engagement, both involving seasoned professionals (Ascenso, 2016; 2017), as well as recent conservatoire graduates (Ascenso et al., 2018), especially in orchestras (the most represented group in our sample), it will be useful to explore this result further in relation to a musician's level of civic engagement through such initiatives.

Developmentally, there is also an important element to consider. Over half of our sample was in the midlife category. This phase is known as a period where a tendency to act on a desire to contribute to society by moulding the next generation takes a central role (i.e. generativity) (Erikson, 1950). Recent reports from orchestral musicians engaged in community-based music projects highlight how social contribution and generativity appear related in this context. The awareness of the social impact of music-making increases musicians' sense of contributing to the next generation and building new audiences, and both were reported as key pillars for their wellbeing (Ascenso, 2016; 2017).

Another important finding was that this high sense of contribution was transversal to all areas of musical activity. Previous accounts have depicted how performers may experience a gap between themselves and the audience, struggling to fully ascertain the impact of their music-making. Performers have reported that a more direct engagement with communities through educational projects allows them to bridge that gap (Ascenso, 2016; 2017). Overall, however, our results seem to suggest that performers, composers, conductors and music teachers equally perceive their life as bringing something of value to society.

#### 5.4.1.3.2 Social integration

Social integration was the second highest mean score of the social wellbeing components. This component depicts the evaluation of the quality of musicians' relationship with their social groups. This evidences that musicians consider they have something in common with the people who form their social reality and have a sense of belonging to their communities and to society more broadly. Crucially, the good levels of *Social integration* were equally reported by musicians working in collaborative settings and working solo. These results seem to contradict the stereotype of musicians as socially isolated (Cambor et al., 1962; Getzels & Csikszentmihalyi, 1976; Kapsetaki & Easmon, 2017) also extended to gifted individuals more generally (Solano, 1987), which go further in associating solitude with emotional maladjustment. While a musician's routine does involve long periods of solitary practice or composition and there are reports of musicians having a sense of insularity in the long hours of practice during conservatoire training (Dobson, 2010) and having a lower sense of social support in orchestra settings when compared to the general workforce (Holst et al., 2011), our study reveals that musicians tend to perceive themselves as socially integrated.

This result echoes previous accounts that, despite using different measures, have reported musicians' relational satisfaction in some capacity, for both professionals (Ascenso et al, 2018 with the PERMA-profiler) and conservatoire students (Antonini Philippe et al., 2019 with the WHOQOL scale<sup>33</sup>). This result is indeed encouraging, especially in a sector characterized by high competition and where tense relationships between colleagues have been identified as a significant source of stress (Cooper & Wills, 1989). Previous reports have highlighted how "musical ability and social competence are closely intertwined" for professional musicians (Cottrell, 2004, p.82) and how musicians value the development of social skills as a central requirement for a successful career (Dobson, 2010) and crucially, during the transition from conservatoire to professional life (MacNamara et al., 2008). Recent accounts with Korean young musicians (Kwon et al., 2018) also revealed musical social networks as a driver to stay in the career despite financial hardship.

The means for students and professionals, when controlling for the effect of age, were very close, but still yielded significance when compared, with a very small effect size. Overall, the high levels of *Social integration* for both groups are very encouraging. For such a large sample, the significant difference can be of little value. Nevertheless, it brings interesting questions. Can conservatoire training offer a greater opportunity for integration than the music professional sector? Is the professional life more challenging in this domain? These deserve attention in future studies. From a developmental perspective, it has been suggested that a professional life brings artists the task of constructing a new form of social integration by finding a way of satisfying both material and artistic identity consolidation needs (Duarte, 2020; Getzels & Csikszentmihalyi, 1976). This can help explain the slight advantage of students over professionals in this domain.

## 5.4.1.3.3 Social actualization

*Social actualization* encapsulates the perception that society is a framework with potential to develop further through its institutions and citizens, enabling growth and self-actualization. Keyes (1998) highlights how healthier people maintain hope about the future of society and have the prospect that they are potential beneficiaries of social growth. This is the social analogue of personal growth. Interestingly, while *Personal growth* was musicians' highest-rated PWB component, *Social actualization* was the

<sup>&</sup>lt;sup>33</sup> The World Health Organization Quality of Life scale (1998)

lowest score of the social wellbeing subscales. Despite a mean score above the midpoint of the scale, it remained relatively low and it was the only sub-scale with a first quartile not above the mid-point. Additionally, for both *Personal growth* and *Social actualization* we find the similar pattern across age categories, with no differences for all, highlighting that older generations of musicians do not seem to have any advantage on this domain contrary to what has been observed in previous research (Keyes, 1998).

Our study reveals that while musicians hold a high sense of continued personal development, perceiving the self as growing, realizing one's potential over time, and contributing to society, there is greater challenge in perceiving society as a framework that fuels that growth and holds a collective potential for positive change. Further qualitative inquiry will be needed to ascertain the meaning behind these means. In particular, it will be valuable to assess how musicians' perception of the current societal view of classical music and its relevance may be impacting this result. An important distinction to explore in future research is that between experiencing a sense of social contribution and feeling socially valued. Previous qualitative research with a group of artists from different specialisms, including music, revealed experiences of societal devaluation in relation to the participant's art (Barker et al., 2009). It will be helpful to clarify if musicians' perceptions on social actualization are related to a sense of limited appreciation from society of their contribution.

#### 5.4.1.3.4 Social coherence and Social acceptance

The final two sub-scales, *Social coherence* and *Social acceptance*, showed Chronbach alphas under the acceptable threshold of .50 (Nunally & Bernstein, 1995). Previous studies have left out the *Social acceptance* scale precisely due to very low reliability (e.g. (Shapiro & Keyes, 2008) so we are cautious with interpretations on these two domains.

*Social coherence* refers to the perception that the social world makes sense and is consistent and predictable. As Keyes (1989) highlights, healthier people besides caring about the kind of world they live in, also have a sense of understanding it. Whereas in previous studies with national samples this has been highlighted as the lowest-rated component (Joshanloo et al., 2018), in our musician sample it was the third highest rating of the five. In line with previous research (Keyes & Shapiro, 2004), we found an advantage for men in this domain. Keyes (1998)'s initial study also described that *Social coherence* was the only element tending to decrease with age. It was suggested that part of the explanation for that result could be related to the intelligibility of the world in American society, with possible skewness toward celebration of a culture that is geared towards the younger generations. In our international sample, we found higher results for the two oldest groups: 45-64 and over 65. Compared with younger musicians, it seems that older musicians find the world more coherent, although we stress again extreme caution interpreting this scale given its limited reliability.

Finally, *Social acceptance* implies holding a positive view of the social world, trusting others, and having a positive view of human nature, believing others are industrious and capable of good (Keyes, 1989). This is considered as the social equivalent to self-acceptance: people who feel good about themselves, accept both the positive and negative aspects of their lives and socially-acceptant people tend to hold favorable views of others (Keyes, 1989; Keyes & Shapiro, 2004). Interestingly, the age pattern for both *Self-acceptance* and *Social acceptance* was the same: over 65 year-old musicians scored higher than the remaining groups. The first quartile of musicians' *Social acceptance* scores was above the mid-point of the scale, meaning that the large majority of musicians reported acceptable levels. As with *Social coherence*, the low internal validity of this sub-scale prevents us from confidently discussing it. Nevertheless, this is indeed an area that deserves further investigation. It will be particularly valuable to further understand this component in light of the relational challenges that have been linked with the music sector, especially the perception of competitiveness and peer-judgement (Dobson, 2010).

## 5.4.1.4 A note on internal consistency

The issue of internal consistency deserves further attention. The overall indicators for the composite scales were good for PWB and Social wellbeing and acceptable for EWB following Nunally (1978)'s criteria, despite slightly lower than those reported in Keyes et al. (2005). However, when looking at the sub-scale level, as mentioned, some alpha coefficients

were markedly low. We have never-the-less kept these sub-scales in the study. Low internal reliability at the sub-scale level has been reported in previous studies using the same measure (e.g. Figueira, 2013; Keyes, 1998b; Ryff et al., 2004; Ryff & Keyes, 1995).

As Ryff et al. (2004) highlight, this issue likely arises from the choice of a reduced number of items for each scale. The current version of the scale represents a reduction from the initial one (with 20 items for each dimension – 120 items in total). To allow for inclusion of the measure in national survey studies and prevent participant burden, this was drastically reduced to 3 items per dimension sacrificing reliability for brevity. The authors highlight the decision was to select items that maximize content validity rather than internal consistency, to guarantee the multifactorial nature of each dimension was represented (Ryff et al., 2004; Ryff & Keyes, 1995). It will be highly valuable to replicate this study with a longer measure.

#### 5.4.1.5 Positive mental health classification

When applying the *Positive mental health* categorization proposed by Keyes (2002) to our data, the results are striking. A total of 79.1% of musicians fall either under the 'Flourishing' or the 'Moderate Mental Health' categories. This means that musicians are predominantly experiencing either high or moderate levels of positive symptoms across emotional, psychological and social wellbeing. These results can seem surprising when looking at the extant literature highlighting the music profession as particularly at risk for strains to wellbeing. However, they reinforce how wellbeing research with musicians has probably not been asking all the right questions. This study measured wellbeing as "being well" – feeling good and functioning well, individually and socially. When positive indicators of functioning are what we assess, musicians' profiles are promising, in line with previous accounts (Ascenso et al., 2018; 2017; Araujo et al. 2017).

These results also bring to light the methodological dangers of a-theoretical or blurry definitions of wellbeing that have permeated Music Psychology literature. Not only are the vast majority of so-called "wellbeing" studies actually assessing disorder, it is difficult to find studies with musicians that clearly state their operational definition of wellbeing and,

crucially, that are rooted in robust theoretical models. This makes comparison of studies almost impossible.

While cautious when comparing our results with Keyes (2002)'s findings from a US national representative sample, given major differences in the two sampling methods, it is encouraging to note a significantly higher proportion of musicians classifying for 'Flourishing' than in general population. This allows us to consider that the high engagement in music-making that characterizes a career in music may indeed offer unique opportunities for wellbeing. This is in line with recent suggestions by Ryff (2019), on the privileged role of the arts in potentiating positive functioning.

Importantly, when comparing the professional sub-sample with Keyes (2002)'s indicators, we gain an even more favourable profile, where besides a significantly higher proportion of musicians in the 'Flourishing' category, there were no differences for the 'Languishing' category. It seems then that the overall results on higher 'Languishing' for musicians were driven by students. When comparing students and professionals, the percentage of students falling into the Languishing category was indeed higher, suggesting that music students may face greater barriers to flourishing than professionals. However, music students' scores are still in line with other student samples (Figueira et al., 2014).

As with most cross-sectional studies, it remains to be clarified whether these differences, along with the positive influence of age, are explained by the development of the positive components of functioning over the years of professional experience or by *a priori* advantage of some musicians on these components – the ones that "make it" in the profession – and the possibility that some of these students will drop-out from the area for being less psychologically fit (Ascenso et al., 2018). Previous research tends to reinforce the former, pointing to the conservatoire setting and the transition to professional life as a particularly difficult period and subsequent development of strategies for optimized functioning after a few years in the sector (Dobson, 2010; Ascenso et al., 2017).

Contrary to previous research (Keyes, 2002), we found no overall association between sex and *positive mental health* status in our sample. We found, however, that the different areas of musical activity differed in the proportion of musicians classifying as Languishing. There were more performers and composers in the 'Languishing' category than teachers and conductors. This can inform further research looking into a deeper understanding of the subjective experience of *positive mental health* in the context of the specific routines of each specialism. Arguably, the challenges around artistic integrity voiced in previous research with orchestral players (e.g. Parasuraman & Purohit, 2000) may play a part in this result.

#### 5.4.1.6 Comparison with other performing arts

The recruitment of actors and dancers for this study was intended as a way of discerning if musicians' *positive mental health* profile was unique or if it shared commonalities with other areas that entail similar activity. This thesis focused on musicians and therefore the recruitment for the other two performing arts was modest. Nevertheless, we were able to compare musicians' results with over 200 other performing artists. The trend is clear: across all sub-scales of EWM, PWB and social wellbeing, both dancers and actors revealed comparable scores to musicians. This was also the case for the categorical distribution of the *positive mental health* classification. The profiles are very clearly overlapping. It remains to be fully clarified which combination of components contributes the most to flourishing for each group. Overall, however, this study is a starting point to the consideration of the performing arts as a fairly unified group when it comes to *positive mental health*.

#### 5.4.2 Limitations

This study had a descriptive goal for which a convenience sample and cross-sectional design were deemed appropriate. However, this methodological choice is not without its limitations. First, as is common in occupational health assessments, the sampling strategy was not probabilistic and participants could decide to take part. Self-selection bias is inherent to the nature of this type of study and impairs any comparisons with large epidemiological surveys based on general population probability samples, along with comprising the generalization of results. Future studies would verify if our trends are reproduced in a representative sample of musicians. Ideally, we would ensure representativeness by sex, age, area of activity and work experience. In particular in the case of age, we were limited by a vague 'over 65' category. Initially, we were focusing on working-age adults and students. However, given the reports on key changes in *positive mental health* during old age (e.g. Snowden et al., 2010), later in the study it became apparent that it would have been valuable to sample purposefully for retirees as well and also to be more specific in the older age categories.

Secondly, one of the limitations flagged by the authors of the scale themselves (Keyes et al., 2002) is that *positive mental health* is diagnosed with multi-item scales employing somewhat arbitrary thresholds for symptom level. They do not stipulate the duration of symptom level and also whether this led to a change in functioning.

Finally, the self-report assessment mode also carries constraints. Besides the inevitable bias that comes from relying on one's own perception of wellbeing, this design has the potential for recall biases, to which sensitive topics are particularly prone. The possibility of social desirability should also not be totally discarded. It has been suggested, however, that this may not be a major confound in wellbeing studies (Diener, 1984; Larsen et al., 1985) despite evidence that for items that ascertain psychological characteristics such as the PWB scale, the risk is higher (Moum, 1998; Pruchno & Hayden, 2000). In our study, this bias was arguably mitigated by anonymity and self-administration (Pruchno & Hayden, 2000; Schwarz et al., 1991). Furthermore, it is very difficult to compare *positive mental health* studies, as across the research-base we find wide methodological variability (e.g. different lengths of scales and different modes of administration).

#### 5.4.3 Suggestions for further research

Two broad areas for further research emerge from the current study: optimisation of the methodological design and investigation of additional variables.

First, a probabilistic sample as a representation of the music sector would ideally be obtained. This is highly impractical and might be best achieved on a national level, as it is virtually impossible to trace all the existing musicians worldwide, especially those working on a freelance basis. Nevertheless, improvements in sampling are required to overcome the limitations outlined above, especially in what concerns representativeness and generalizability.

Secondly, ideally, further research aiming to replicate a *positive mental health* profile of musicians would make use of a scale that could offer higher internal validity across all subscales. Even though the thresholds for Chronbach's alphas are debatable, as is even the use of thresholds in the first place (Henson, 2001; Lance et al., 2006), a more robust scale would be advantageous. Currently, for the construct in question, such scale doesn't yet exist.

Additionally, despite providing a very useful typology for *positive mental health* with the aggregation of both hedonic and eudaimonic components, Keyes (2002)' work with the MHC does not, however, provide information on the specific contribution of the single subcomponents to the overall scores, and thus on how the elements come together. It will be highly valuable to explore the specific combinations of elements within the major categories of mental health (for recent attempts on this, see Pancheva et al., 2020). For example, for musicians with higher eudaimonic than hedonic wellbeing, what are the components or clusters of components contributing the most to that overall score? For the languishing musicians, what are the components, or combinations of components, that tend to be lower together? And also, for the moderate mental health group – what is preventing them from flourishing?

Moreover, a longitudinal design will allow for the clarification of patterns of causality for *positive mental health*. In particular in what concerns age trends, as previously argued (Ryff, 1989; Ryff and Keyes 1995; Ryff et al., 2004), the different age profiles underscore the need for a closer look into the intra-individual multidimensional dynamics of positive functioning across the lifespan, through exploring gains in some areas, losses and stability in others. For example, to what extent do musicians' developmental transitions impact some dimensions of wellbeing but not others? In the case of students, this design would allow to further clarify the trajectory of individual profiles of wellbeing from the beginning to the end of conservatoire training, providing a richer understanding of the specific challenges around transitioning to the professional stage that have been highlighted in previous research (Ascenso et al., 2016; Ascenso et al., 2019; Dobrow, 2013).

Qualitative inquiry also appears as a natural next step following this study. Although the MHC-LF allowed for our intended 'snapshot' of musicians' *positive mental health*, it will be crucial to understand the meanings behind our means, as they are constructed subjectively, in context. Qualitative research will enable to understand the occupational, institutional and personal determinants that may underlie the correlations found in our study. As Galambos et al. (2020) point out, focusing on mean values and looking at a single trajectory of wellbeing is of limited scientific and applied value as it conceals the diversity in pathways and sources for wellbeing. For example, it will be valuable to unpack the reasons behind the advantage of older musicians across several components: *Social-acceptance, Environmental mastery, Autonomy* and *Positive relations*, as well as for all of the social wellbeing components except *Social actualization* and for *Positive affect* in the women's group. In particular, it will be of interest to explore these results in light of how musicians negotiate both the developmental tasks of their stage of life and the dynamics of an ever-changing music sector.

Our results on *Personal growth* deserve special attention. The levels found were striking and similar across all age groups. First, it will be key to unpack how the different groups experience *Personal growth* and their correlates. Despite similar results, different variables may be contributing to them at different points in life (Bauer & Park, 2010). Here, it will be essential to verify if a longitudinal assessment replicates our findings. Recent longitudinal research has highlighted that, contrary to what was previously suggested (Ryff & Singer 2008; Springer et al. 2011), Personal growth trajectories vary among ages and sexes, with more stability or even an increase being observed in the later ages (Toyama et al., 2020). The same study also evidenced the richness in the dynamics of ageing, when analysing components together longitudinally. For example, having positive relationships was found to increase in importance for aging adults to sustain higher Personal growth. Furthermore, previous research has evidenced that Personal growth could be linked with a variety of factors such as endorsing learning goals over performance goals, curiosity, whether the person seeks growth versus external validation, the ability to learn from challenging situations, generativity, and spirituality (Bauer & Park, 2010; Dweck & Leggett, 1988; Dykman, 1998; Kashdan et al., 2004; Ryff, 2014; Tedeschi & Calhoun, 2004; Villar, 2012).

More recently, Lee et al. (2018) have highlighted, however, how a focus on intrapersonal factors for growth can lead to an oversimplified approach and stressed that developing towards one's goals is closely tied to one's social environment. For a thorough understanding of musicians' *Personal growth*, therefore, the inclusion of both intra and interpersonal factors will be key.

*Environmental mastery* was the lowest of the PWB scores. Particularly striking is to place this result in relation to the high level of *Personal growth*. While musicians report experiencing a high sense of growth, it also seems like the profession is not fully enabling musicians' needs for autonomy and competence to be fulfilled in the work setting, and therefore can do more to encourage flourishing in this domain. Of course the sources of flourishing in life span well beyond our context of paid employment, and musicians' judgements on their *Personal growth* were in this study assessed globally, referring to all life not just music-making. Also, qualitative accounts have shed light into self-driven parallel music projects as a source of compensation for musicians who encounter challenges in their paid work (Ascenso, et al., 2017). It will be essential to investigate if and how the *modus operandi* of the sector may be contributing to this challenge.

Enlarging the number of correlates investigated will be another valuable avenue for follow-up. First, we only included musicians who are working in music as their main source of income. Working status has been found to hold important links with PMH components such as purpose (Pinquart, 2002; Weston et al., 2021), personal growth (Toyama et al., 2020), social wellbeing (Blustein, 2006, 2011; Flum, 2015; Swanson, 2012) and overall flourishing (Capone & Petrillo, 2020; McDaniel & Keyes, 2013). Unemployed musicians need to be included in further research.

Another area worth addressing in further studies is the impact of socio-economic status (SES). Traditional measures of SES are not equivalent across social groups, and may not validly measure all relevant aspects of what they intend to measure (Braveman et al., 2005; Williams et al., 2010). In order to collect enough data for a valid SES assessment across countries, we would need an extensive list of questions that would compromise the practicality of the survey and incur survey burden. This remains, however, an important variable to be taken into account in further studies.

Marital status has also been linked with PMH and crucially, the transition across different statuses (Marks & Lambert, 1998). Overall, results seem to point to an advantage of married over non-married and this has been attributed to the social and emotional support of a partner (Robins & Reiger, 1991). Interestingly, however, non-marital cohabitors are the group most likely to report lower *Social wellbeing* (Shapiro & Keyes, 2008). In future studies it will be valuable to enlarge the pool of demographic variables included, to allow for an expanded exploration of pathways and sources for wellbeing among musicians.

In addition, an inevitable characteristic of an international sample, is its high racial diversity. Race and minority status have previously been highlighted as important predictors of PWB (Ryff et al., 2004) but remained unaddressed in the current study.

Finally, another needed follow-up study concerns the integration of musicians' physical health assessment with *positive mental health*, for a complete health profile (Keyes & Grzywacz, 2002; Snowden et al., 2010). Given the high rates of playing-related injury among musicians, it would be especially useful to obtain successive waves of data that would allow investigation of the impact of injury on mental health. Challenge may foster elements of wellbeing such as self-acceptance, mastery and personal growth (Frankl, 1945; Ryff, Keyes, et al., 2004). Wellbeing is often investigated as outcome or dependent variable, and at times also as an antecedent or predictor variable. However, it can also be seen as a moderating variable (protective factor) (Ryff & Singer, 2000; Shmotkin, 2005; Singer & Ryff, 1999). Another pressing investigation with musicians concerns the *protective* role of *positive mental health* when facing occupational challenges such as playing-related injury and music performance anxiety or general life transitions. It would be highly informative to investigate how flourishing and moderate mental health can be a source of resilience and act as a buffer in these experiences.

In summary, the profile of *positive mental health* among musicians (RQ1) is largely positive across all its components, with an encouraging proportion of musicians reporting flourishing. For professionals, this is even more so, with clear advantages when comparing with general population indicators. Musicians' profile is also in line with other performing arts.

# 6. STUDY 2: MUSICIANS' PSYCHOLOGICAL DISTRESS PROFILE

## **6.1 Introduction**

The purpose of Study 2 is to investigate musicians' mental illbeing profile. Given the extensive literature on the profession's negative impact on wellbeing, particularly the high prevalence of performance anxiety, along with the compelling proposal in recent research to equate mental health and mental illness as separate dimensions (see Chapter 2), there is a specific interest in addressing wellbeing as more than the absence of illbeing. In light of this, both the positive and the negative continua of functioning are considered essential to provide a complete profile. The *positive mental health* profile (Study 1) positioned musicians on the *mental health continuum*. The psychological distress profile, the aim of the present study, allows assessment of musicians' risk of mental illness, enabling clarification about the *illness continuum*. Similarly to Study 1, and drawing from the challenges reviewed in Chapter 3, trends among professionals and students are investigated.

This section presents the construct of psychological distress and three key areas of existing findings. First, we explore its epidemiology and population-level studies prevalence rates. Secondly, given the interest in both workforce and student samples, we will take a closer look at occupation health studies and prevalence rates for specific professional groups as well as third, provide an overview of studies with higher education students. The section ends with the aims for the current study.

#### 6.1.1 Psychological distress: The construct

Nonspecific psychological distress (NPD)<sup>34</sup> is an indicator of mental illness, widely used in both clinical settings and public health research. As Thelin et al. (2017) highlight, it is a transdiagnostic feature of psychological illbeing, in other words, not specific to a

<sup>&</sup>lt;sup>34</sup> Not to be confused with the common use in medical literature of NPD as an acronym for Narcissist Personality Disorder.

particular disorder. NPD<sup>35</sup> is characterized by high levels of cognitive, behavioral and emotional symptoms typically associated with the distress experienced by individuals with common mental disorders (CMD) such as anxiety and depression (McVeigh et al., 2006). Individuals with NPD are highly likely to have a DSM-V clinically relevant disorder. The higher the level of distress, the greater the likelihood of meeting the diagnostic criteria for CMD (Cuijpers et al., 2009). However, not all individuals with mental disorder present high psychological distress, as there are conditions primarily associated with other psychopathological features. Patients in remission or undergoing psychopathology treatment may also not have sufficient symptoms of distress to meet threshold criteria for NPD. This distinction is key and helps explain discrepancies between prevalence rates for mental disorder and psychological distress.

Psychological distress is especially useful as an assessment tool for circumstances where a diagnostic interview or clinical diagnosis is infeasible. Irrespective of its status as a solid indicator for diagnoses of CMD, NPD is a useful construct in its own right. The high inter-correlation between NPD symptoms and the factor loadings on a first general dimension have assured the statistical properties which strengthen its conceptualization as a psychological construct (Kessler et al., 2005).

Despite the significant research base on psychological distress, a closer look reveals that this expression is often applied to different combinations of elements beyond depression and anxiety symptoms, including disabilities, patterns of behaviour and personality traits. This generates confusion and can hinder valid comparisons between studies. For example, an important distinction is between NPD and the use of the term "distress" as a transient phenomenon described in the stress literature, defined in relation to the exposure to a stressful event, the incapacity to cope well and the resulting emotional challenges (Ridner, 2004). In this context, it is generally argued that psychological distress is eliminated either by removal of the stressor or by effective coping (Lazarus & Folkman,

<sup>&</sup>lt;sup>35</sup> We will hereon use 'psychological distress' and 'NPD' interchangeably to refer to this trans-diagnostic feature.

1984).<sup>36</sup> This differs from NPD: a relatively stable, undifferentiated state of emotional suffering marked by symptoms of depression (e.g., sadness, lost interest, hopelessness) and anxiety (e.g. feeling tense, restlessness), with significant impact on day-to-day functioning and social adjustment, and leading to common mental disorders, if untreated (Deasy et al., 2014; Kessler et al., 2002; Wheaton, 2007).

Recent research has investigated the temporal trends in the prevalence of psychological distress. Given the dramatic increase in mental health support accessibility and psychopharmacological resources in developed countries, it would be expectable to see a reduction in the prevalence of psychological distress. Interestingly however, studies with large general population groups, including from the UK (Brugha et al., 2004), the US and Canada (Kessler et al., 2005; Keyes et al., 2014; Mojtabai & Jorm, 2015; Tomitaka et al., 2019), Australia (Reavley et al., 2011) and Japan (Nishi et al., 2018), have evidenced minimal to no change in prevalence of psychological distress in the past two decades within the same populations. This is a unique feature of psychological distress, when comparing with prevalence rates of a wide variety of diseases, which tend to exhibit variations over time.

A few suggestions have been put forth to explain this stability. First, potential reductions in prevalence due to increasing treatment accessibility may have been masked by greater public awareness of mental illness and the consequent increase in the reporting of symptoms (Mojtabai & Jorm, 2015). In other words, more people are reporting psychological distress and this can be compensating the difference made by increases in treatment. The apparent stability of prevalence rates can also be explained by the concurrent increase in social distress (Tomitaka et al., 2019). Finally, despite the rise in treatment accessibility and pharmacological options, these might still be insufficient to meet the demand, in particular from people in greatest need (Jorm et al., 2017).

<sup>&</sup>lt;sup>36</sup> There is strong evidence confirming the influence of stress on psychological distress. As Dapreau et al. (2012) point out, however, making stress part of the definition of distress fails to acknowledge that distress, as it is defined in medical literature, can indeed occur in the absence of stress.

#### 6.1.2 Epidemiological trends in psychological distress

Given its potential as a strong indicator of common mental disorder, NPD has been a regular element in a large number of mainstream population health studies, both on national scales as well as globally with, for example, the World Health Organization's World Mental Health Survey (Kessler et al., 2010). It is difficult to pinpoint trends on its prevalence given that several core methodological factors vary considerably across studies. First, there is a variety of scales for the same construct, despite sharing similar operational definitions. Secondly, even for the same scale, there is diversity across studies in the cutoff points used to define the levels of severity for distress. Thirdly, the timeframes used as indicators for symptoms also vary (e.g. last 30 days, last year, last week, etc.). There is also variation in the format of assessment (e.g. self-report via mass surveys, household panel interviews, etc.), bringing in yet another factor that could affect the results. It has been suggested that selfadministered anonymous surveys may enable more realistic disclosure and translate into higher reported prevalence of psychological distress when comparing to face-to-face interviews (the dominant method across, for example, the often cited US and Australia's large-scale studies) (Fushimi et al., 2011; Hilton et al., 2008; McVeigh et al., 2006). The latter method has also been associated with more stereotypical reports of emotion (Fushimi et al., 2011; King & Buchwald, 1982). Finally, the connotation implied in the way the assessment is introduced (e.g. mental illness survey, health promotion survey, etc.) can be a source of bias and influence interpretations of items and response tendencies (Bültmann et al., 2002; Sigmon et al., 1997).

Most annual population-level studies addressing NPD provide insight into USA and Australian indicators. Overall, there is high discrepancy, and in the past 20 years, the prevalence of psychological distress reported for community population groups ranges between 3.4% and 27.7% (e.g. Australian Bureau of Statistics (ABS), 2006; Benzeval & Judge, 2001; Brandheim et al., 2013; Chittleborough et al., 2011; Forman-Hoffman et al., 2014; Gispert et al., 2003; Kuriyama et al., 2009; NIHS, 2020; Phongsavan et al., 2006; Weissman et al., 2015). For example, the US's National Center for Health Statistics, provides regular updates on the National Health Interview Survey (NHIS). This initiative has allowed to monitor health status in the USA since 1957, sustaining care access and progress towards national health targets. For 2018, the most recent year of data available (NHIS, 2020), the percentage of adults aged 18 and over who had reported serious psychological distress (SMI) during the previous 30 days was 3.9% (95% CI = 3.51%-4.28%), a higher indicator than the 2017 estimate of  $3.4\%^{37}$ . The current data from the same initiative, based on a collection from January–June 2019 yielded a prevalence of 11% for the adult population (95% CI = 10.3%-11.6%) reporting symptoms of anxiety disorder and/or depressive disorder. Data are based on a highly similar sample and equally resulting from household panel interviews. However, the questionnaire had different questions, which again, highlights the difficulty of meaningful comparisons<sup>38</sup>.

A look at New York (n = 354,000) analysing data from 2002 to 2015 found high psychological distress in 5% of a general population sample (Choden et al., 2018). Data from 2004 with a sample from the Boston area (Colpe et al., 2009) revealed a 12.2% prevalence for high psychological distress with 20.2% for the 18-25 age range.

In Australia, the Australian Bureau of Statistics (2018) reported that in 2017-18, around one in eight (13%) Australian adults reported high or very high levels of psychological distress. This represented an increase from 2014-15 (11.7%). Women reported high or very high levels of psychological distress more than men (14.5% and 11.3% respectively). Between 2014-15 and 2017-18, rates of high or very high psychological distress stayed fairly stable for most groups, except for an increase in women aged 55 to 64 (from 12.3% to 16.9%).

Results from the UK Household Longitudinal Study (UKHLS) (ISER, 2012), (n = 16485) looking at three waves of data (2009–2010, 2010–2011 and 2011–2012), found that 7.9% of the sample classified for high psychological distress and 8.16% for moderate. In a Swedish sample of 68.311 adults, Brandheim et al. (2013) found high psychological distress

<sup>&</sup>lt;sup>37</sup> Data are based on household interviews.

<sup>&</sup>lt;sup>38</sup> Recent data from a survey with 2,032 participants during the Covid-19 pandemic (data collection between May 14-19 2020), compared the current trends with those of the 2018 NHIS. During the pandemic, individuals were eight times more likely to experience SMI (27.7% vs. 3.4%) and the likelihood of qualifying for moderate or serious mental illness, together, was three times as higher (70.4% vs. 22.0%). These differences were larger among younger adults (Twenge & Joiner, 2020). Despite not being a longitudinal study, this does provide a compelling case for questioning the stability of NPD during crises, echoing a similar trend observed after the 9/11 attacks (McVeigh et al., 2006).

in 20% for women and 12.2% for men. In Japan, a study looking at trends in NPD from 2007 to 2016 found an overall prevalence rate of 4.1% for high and 24% of moderate distress (Nishi et al., 2018).

The discrepancies in prevalence rates across studies may, as mentioned, simply reflect methodological factors rather than true epidemiological differences (Drapeau et al., 2012). Refinement of methodological consistency is needed to ensure any valid comparisons. Another aspect to consider is that, as most psychological research, studies on distress are typically Western-centered and may not provide findings that can be generalized to countries with a different socio-cultural matrix or to diverse international samples. Furthermore, specific groups have revealed higher prevalence rates, and may be differently represented across samples. This is the case of immigrants, for example, with a range of psychological distress from 13% to 39% (Levecque et al., 2009; Sundquist et al., 2000; Ritsner et al., 1999).

Overall, despite the relatively high prevalence of psychological distress, there is a tendency for low levels of help-seeking behavior (Wadman et al., 2019).

#### 6.1.2.1 Trends in psychological distress according to sex and age

Two tendencies in psychological distress prevalence studies seem fairly consistent across the research base. The first is that women typically report greater psychological distress than in men in most countries (Weissman et al., 2015; Jorm et al., 2005; Phongsavan et al., 2006; Caron & Liu, 2011; Vázquez et al., 2012). This trend seems to emerge in every age group (Bijl et al., 2003; Cairney & Krause, 2005; McDonough & Strohschein, 2003; Myklestad et al., 2012; Oakley Browne et al., 2010; Paul et al., 2006; Piccinelli & Wilkinson, 2000; Walters et al., 2002; Weissman et al., 2015). This is unsurprising, as a similar pattern is found in the rates of diagnosed affective disorders (Piccinelli & Wilkinson, 2000; Jacobi et al., 2004; Kessler et al., 1994). A systematic review revealed that anxiety disorders were approximately twice as prevalent among females (Somers et al., 2006).

It has been suggested that there may be biological, psychological and social factors (and their interactions) at the base of this discrepancy. These can include hormonal differences, personality traits, cognitive tendencies such as rumination as well as higher exposure to risk factors for women (Cleary & Mechanic, 1983; Hopcroft & Bradley, 2007; Kuehner, 2003; Parker & Hadzi-Pavlovic, 2004), and higher pressure due to societal roles and expectations (Beauregard et al., 2011). In a review on possible mechanisms that can explain the sex differences, Dapreau et al. (2012) conclude that there is mixed evidence and no consensus. An interesting point raised by the authors, echoing previous suggestions (Leach et al., 2008), is that, in most cultures, the perception and expression of emotions differs across sexes. The way psychological distress is assessed can itself be biased, with items being worded in ways more frequently endorsed by women than by men.

Despite some consistency however, there are also exceptions to this trend and the possible cultural biases in assessment might help to explain them. Examples where no differences in psychological distress have been found between sexes include Mexican Americans (Aranda et al., 2001), immigrants in Nepal (Thapa & Hauff, 2005) and a rural community in Australia (Kilkkinen et al., 2007).

A second thread of relatively consensual evidence points to a negative association between age and psychological distress across countries, both when it is assessed as distress in the worst month of the past year, and as past month distress. Overall, the prevalence of NPD tends to decrease with age, starting from late adolescence (Bijl et al., 2003; Caron & Liu, 2011; Gispert et al., 2003; Jorm et al., 2005; McDonough & Strohschein, 2003; Oakley Browne et al., 2010; Phongsavan et al., 2006; Walters et al., 2002). The extent to which this trend is evident depends mainly on the age range of each study. Explanations for it usually include the different set of risk factors across the lifespan along with the effect of survival bias.

Despite a general decline with age, not all studies find linear trends. For example, a large study with New York residents found that adults aged 45-64 had a higher prevalence of severe psychological distress compared with adults aged 18 to 24 (6% vs. 4%) (Choden et al., 2018). Another study has highlighted an increase in NPD up to middle age, with a decline to about 60 followed by a second rise (Pevalin, 2000). It has also been suggested that NPD might follow a U-shaped distribution (Schieman et al., 2001), with peaks at ages

18-29 and 80-89. Studies with older adults have evidenced an increase in psychological distress after 65 years old (Cairney & Krause, 2005; Paul et al., 2006).

The period of emerging adulthood (roughly from the late teens to the mid- to late-20s) has been suggested as particularly critical for mental illness (Arnett, 2000, 2014). This period involves identity exploration and key adjustments around autonomy, career development, personal relationships, education, and often also parenthood (Slater, 2003; Vaillant, 2003). The peak onset for mental illness is before the age of 24 (Kessler et al., 2007) and overall, mental disorders are more prevalent among the 18-29 years age range (Adams et al., 2014; Andrews et al., 2001; Arnett, 2000; Bijl et al., 1998; Jacobi et al., 2004, 2004; Kessler, Chiu, et al., 2005; Wittchen et al., 1998). When looking specifically at non-specific psychological distress, a review of eight studies investigating it over the lifespan concluded that findings were inconsistent (Jorm, 2000), possibly confounded by cohort effects, age biases and the potential impact of neuroticism, which tends to decrease with age. More recently, Keyes et al. (2014) assessing estimated age effects in both the US and Canada across data spanning more than 20 years, including findings from the National Health Interview Survey from 1997 - 2010 (n = 447,058) and from the Canadian Community Health Survey from 2000 - 2007 (n = 125,306), found that the 21 to 25 age group had the greatest level of distress at each wave.

Besides the effects of socio-demographic variables on psychological distress in community samples, the prevalence for specific groups has also been of interest through occupational health studies and studies with student populations, both of particular interest for the present study.

#### 6.1.3 Psychological distress trends in occupational health studies

Both cross-sectional and longitudinal studies have described NPD prevalence rates in work-force samples. Estimates vary widely by country and by activity. Adding to the methodological difficulties already laid out, these findings also hinder comparisons due to differences in the classification of professional occupations across countries. Table 6.1 (p. 179) presents a summary of 23 studies assessing psychological distress within specific occupational groups. These examples were chosen for having used screening scales which are consistent among each other in terms of the construct they assess, aligning also with the assessment tool chosen for the current study (see Section 6.2.1). Again, there is high discrepancy, with rates of psychological distress ranging from 7.1% to 92.3%, encompassing different levels of intensity.

Occupational studies tend to report much higher distress rates than those of employed subgroups from general population reports. For example, the Australian Bureau of Statistics (2006) reported a prevalence of 1.9% for very high distress among employed Australians as a subgroup, while large-scale studies with Australian private sector company employees and bank workers found rates between 3.9% and 5.7% (Hilton et al., 2008; Hilton & Whiteford, 2010) or up to 24.8% when considering moderate or high psychological distress together (Hilton & Whiteford, 2010). Despite using the same scale, the levels of intensity reported are different (very high distress vs high or high and moderate together). The groups are also different, with the general population study including a wider range of activities, bringing to light again how any comparison needs extra caution.

Recent data from the Australian Army (n = 1730), revealed a 51% rate for moderate or high distress for this group (Searle et al., 2019). Healthcare workers also report high rates of distress. In China, a study with hospital nurses highlighted a combined rate of 92.3% of NPD, encompassing all levels of distress intensity (Feng et al., 2018). A recent large-scale survey of Australian doctors found that 16.4% were either very highly or highly distressed (Telethon Institute for Child Health Research., 2019). When looking at under-researched occupations, such as miners, James et al. (2018) found a combined 44.4% prevalence rate for moderate, high or very high levels of psychological distress, echoing a previous study with a similar population (Considine et al., 2017). Taxi drivers seem to be at particular risk, with 61% reporting high/very high psychological distress (Davidson et al., 2018).

Interestingly, trends in occupation health studies for sex seem to be different from those in general population samples. For example, a study involving 60.556 full-time employees of 58 large public and private sector companies, part of the World Health Organization's Health and Performance at Work Questionnaire initiative, evidenced no statistical difference in NPD across sex or age groups (Hilton et al., 2008). It remains to be clarified if this is explained by females with higher levels of distress leaving the work-force precociously, as has previously been suggested (Prause & Dooley, 2001).

Overall, it is clear that high prevalence of distress is experienced across varied professional groups. Comparisons are highly hindered by the diversity of methodological choices across studies.

Table 6.1. Psychological distress studies with professional samples

Authors	Sample	Measure of Psychological Distress	Prevalence <sup>1</sup> (or mean score, when prevalence not available)			
Searle, VanHooff, McFarlane, Davies, Tran, Hodson, Benassi and Steele (2019)	Australian Army (n=24481)	Kessler Scale of Psychological Distress (K10)	51% moderate distress or over			
National Survey of Mental Health and Wellbeing, Beyond Blue Ltd. (2019)	Medical doctors in Australia (n = 12252)	K10	16.4% very high or high psychological distress			
Sampasa-Kanyinga, Zamorski and Colman (2018)	Canadian Armed Forces (n=6700)	K10	7.1% high/very high psychological distress			
Bowers, Lo, Miller, Mawren and Jones (2018)	Mining and construction workers in Australia (n=1124)	K10	28% high/very high psychological distress			
Shenoi, Kalyanaraman, Pillai, Raghava and Day (2018)	Paediatric critical care physicians in the US (n=253)	General Health Questionnaire (GHQ-12)	30.8% significant psychological distress in the past month			
Feng, Su, Wang and Liu (2018)	Hospital nurses in China (n= 581)	K10	92.3% psychological distress (all levels combined)			
James, Tynan, Roach, Leigh, Oldmeadow, Rahman and Kelly (2018)	Miners in Australia (n=1799)	K10	16.9% high/very high psychological distress 27.5% moderate psychological distress			
Kunie, Kawakami, Shimazu, Yonekura and Miyamoto (2017)	Nurses in Japan (n= 789)	K6	Mean for psychological distress 7.7 (SD=5.29)			
Davidson, Wadley, Reavley, Gunn and Fletcher (2018)	Taxi drivers in Australia (n=380)	K10	61% very high/high psychological distress			
Van der Wal, Bucx, Hendriks, Scheffer and Prins (2016)	Anaesthesiologists in The Netherlands (n = 665)	GHQ-12	39.4% psychological distress in the past month			
Bannai, Ukawa and Tamakoshi (2015)	School teachers in Japan (n= 522)	GHQ-28	47.8% psychological distress in males in the past month 57.8% psychological distress in females in the past month			

<sup>1</sup> Category reporting varies across studies; percentages for the different severity categories are presented as presented in the study.

#### Table 6.1. Psychological distress studies with professional samples (continued)

Carlisle and Parker (2014)	Australian coal miners (n=231)	K6	9.6% high psychological distress 28.4% moderate psychological distress 61.9% low psychological distress
Cocker, Martin, Scott, Venn and Sanderson (2013)	Workforce from small-to-medium enterprises (SME) (n=217)	K10	36.9% very/ high psychological distress 63.1% moderate/low psychological distress
Inoue, Kawakami, Tsuno, Tomioka and Nakanishi (2013)	Employees from a manufacturing company in Japan (n=1017)	K62	43.6% psychological distress
Nielsen, Tvedt and Matthiesen (2013)	Petroleum industry workers (n=628)	Hopkins Symptoms Checklist -25 <sup>3</sup>	9% Psychological distress (all levels)
Marchand, Drapeau and Beaulieu-Prevost (2012)	Cycle 4 (2000–1) of the Canadian National Population Health Survey (upper managers, supervisors, professionals, white-collar workers, blue-collar workers) (n=7258) <sup>4</sup>	K6	Mean for employed as 2.2 (95%CI 2.2-2.3) Mean for non-employed 4.1 (3.8-4.5)
Hatch, Winefield, Christie and Lievaart (2011)	Veterinarians in Australia (n=1947)	K10	19.8% high/very high psychological distress 43.6% moderate psychological distress
Vecchio, Scuffham, Hilton and Whiteford, (2011)	Nurses in Australia (n=5724)	K6	4.51% high distress, 22.66% moderate distress, 72.83% low distress
Hilton and Whiteford (2010)	Employees from 58 companies in Australia working in sales (n=11259)	K65	From 24.8% (staff working directly with customers) to 10.2% (non-customer staff) high and moderate distress
Hilton and Whiteford (2010)	Australian bank workers (n=2129)	K6	18.7% high or moderate psychological distress
Hilton, Whiteford, Sheridan, Cleary, Chant, Wang and Kessler (2008)	Public and private sector company employees (n = 60556)	K6	14.1% high or moderate psychological distress
Chaplain (2008)	Trainee secondary teachers in England (n=343)	GHQ-12	38% high psychological distress
Boxer and Wild (1993)	Firefighters N=145	GHQ-12	41% high psychological distress

<sup>&</sup>lt;sup>2</sup> Cut-off for no/moderate distress used was 5 (different from the recommended cut-off of 7). <sup>3</sup> The HSCL-25 is a symptom inventory which measures psychological distress through symptoms of anxiety and depression with 25 items: 10 for anxiety symptoms, 15 for depression symptoms. <sup>4</sup> Via telephone interviews.

<sup>&</sup>lt;sup>5</sup> Integrated in the Health and Work Performance Questionnaire (WHO)

Despite the prolific research base, musicians are mainly absent from mainstream psychological distress large-scale occupational studies. As reviewed in Chapter 3, one of the few exceptions is a study by Vaag and colleagues (2015) finding a 17.5% rate of psychological distress, with a higher rate reported for women musicians (21% vs 15% for men). This study included a fairly heterogeneous sample (pop, rock, classical, traditional music and mixed genres musicians) from only one country (Norway).

Besides profiles within *professional* samples, of interest to the current study are also the trends of psychological distress among *student* populations.

#### 6.1.4 Psychological distress trends in student populations

As mentioned, the peak onset for mental illness is before the age of 24 years (Kessler et al., 2007; Macaskill, 2013), making typical higher education students a group of particular risk. Adding to the developmental challenges already highlighted, students experience specific pressures inherent to academic life. Over a short period of time, there are abrupt changes underlying the transition to college life and students face new sources of stress that may impose considerable strain (Creed et al., 2003; Needham, 2007; Schulenberg et al., 2004). Stress related to academic performance has been found to increase the odds of psychological distress among adolescents (Myklestad et al., 2012).

Overall, findings from research on the mental health of university students are consistently concerning. A recent study with 461 UK university students reported 58.8% of mild/moderate or severe psychological distress (Wadman et al., 2019). Previous studies had pointed to rates of 20 to 30% in similar samples (Bewick et al., 2008; Kreß et al., 2015). University counselling services have recently reported increased referrals and, crucially, increased rates of complex cases (BACP, 2017). The UK's Royal College of Psychiatrists (2003, 2011) has predicted that the widening of participation in higher education is likely to translate in higher rates of mental illness among student samples. This is both due to wider sectors of the population engaging with education, as well as the possible reductions in funding resulting from it, leading to additional financial pressures for students. There is evidence on the association between psychological distress and financial strain among

tertiary education samples (Stallman, 2010; Eisenberg et al., 2007; Andrews & Wilding, 2004).

Overall, students tend to report higher distress than the general population (Leahy et al., 2010; Stallman, 2010; Telethon Institute for Child Health Research., 2019). Within samples, and following general population trends, the risk of mental disorders is generally higher for younger students (Maser et al., 2019; Stallman, 2010) and females (Bore et al., 2016; Maser et al., 2019; Tang et al., 2018).

Table 6.2 (p. 184) presents a list of prevalence findings from studies addressing psychological distress with student populations. As with occupational studies, rates are highly disparate. Different cut-offs are used for defining psychological distress, which again flags the need for extra caution when comparing results.

Looking across a sample of 6479 university students in Australia, Stallman (2010) found the majority of students (83.9%) reported enhanced distress levels, 19.2% evidencing severe mental illness and 64.7% moderate mental illness. Only 16.1% of students classified as non-cases. Leahy et al. (2010), found similarly concerning results, highlighting also significant differences with age-matched peers, with students consistently reporting more distress than non-students. In a sample of undergraduate students from various specialisms (Medicine, Law, Mechanical Engineering and Psychology), the team found students to be four times more likely to be classified as psychologically distressed than population peers (48% vs 11%). Interestingly, there were no significant differences in distress between national and international students (Leahy et al., 2010).

Medical students have been the focus of particular attention. Rates differ across studies, however the general trend is to observe high rates of psychological distress and, importantly, higher rates than those of intern doctors in the transition to the profession (Dendle et al., 2018; Maser et al., 2019; Telethon Institute for Child Health Research., 2019; Yamada et al., 2014).

Despite the interest in assessment of psychological distress in students, performing arts students are mostly absent from the research base. Research is primarily focused on university students and there is a gap on psychological distress data from samples engaged in arts vocational training. Recent EUROSTAT (2020) reports point to a figure of 19.8 million students in the EU in 2017, of which 61% were studying at a Bachelors degree level. Of these, 2.355.185 students are classified under the "Music and Performing Arts" category (representing almost 20% of the total Bachelor degree student population). It is therefore surprising that this group has not yet been focus of attention. A profile of NPD and subsequent predictions on proneness to mental illness for music students appears to fill a crucial gap and emerges as a necessary step towards meaningful mental health initiatives with this group.

|--|

Authors	Sample	Measure of	Prevalence
		Psychological Distress	(and/or mean score, when available)
Maser, Danilewitz, Guerin, Findlay and Frank (2019)	Medical students in all years of study at all 17 Canadian medical schools (n=4613)	K6	4.2% Severe Mental Illness (95% CI 3.6-4.8%); 13.9% (95% CI 12.9-14.9%) Moderate Mental Illness Mean score for K6 = 5.4 (±3.8)
Wadman, Webster, Mawn & Stain (2019)	UK University students (n=461)	K6	58.8% mild/moderate or severe psychological distress
Telethon Institute for Child Health Research (2019)	Medical students in Australia (n=1811)	K10	10.7% Very high psychological distress (pre-clinical students), 8.4% (clinical students) students) Significantly high than intern doctors (4.4%)
Tang, Byrne and Qin (2018)	Undergraduate students in China (n=5972)	Symptom Checklist- 90-revised (SCL-90- R)	40.7% psychological distress (moderate or high)
Dendle, Baulch, Pellicano et al. (2018)	Medical Students, first clinical year (n=126), at three time points in Australia	K10	33.1% to 47.4% psychological distress across the three time points
Bacchi and Licinio (2017)	Medical and psychology students in Australia (n= 560)	K10	48% psychological distress for medical students, with 18% very high 55% psychological distress for psychology students, with 28% very high
Bore, Kelly and Nair (2016)	Medical students in Australia (n=127)	K10	18% very high/high psychological distress; 31% moderate and 51% low
Knowlden, Hackman and Sharma (2016)	Undergraduate college students in an American university (n= 195)	K6	9.2% severe mental distress 59.9% moderate mental distress 33.8% low to zero mental distress Mean K6 score was 6.82 (SD=4.60, Median 6)
Kang, Guo, Xu et al. (2015)	Undergraduate students in China (n=8289)	K6	4% high psychological distress 16.7% moderate psychological distress 79.3% low psychological distress
Yamada, Klugar, Ivanova and Oborna (2014)	Medical international students in the Czech Republic (n=138)	The Medical Student Well-Being Index	43% psychological distress
Deasy, Coughlan, Pironom et al. (2014)	Nursing/midwifery and teacher education students in Ireland (n=1557)	GHQ-28	41.9% high psychological distress
Divaris, Mafla, Villa-Torres et al. (2013)	Dental students in Colombia (n=5700)	Global Severity Index Score (GSI)	8% high psychological distress
Leahy, Peterson, Wilson et al. (2010)	Undergraduate students (Medicine, Law, Mechanical Engineering and Psychology) in Australia (n=955)	K10	Male students: 48% high psychological distress (vs 11% for age-matched community peers) Female students: 26% very high/high psychological distress; 34% moderate psychological distress and 41% low psychological distress.

Authors	Sample	Measure of Psychological Distress	Prevalence (and/or mean score, when available)
Stallman (2010)	Australian university students (n=6479)	K10	83.9% psychological distress, 19.2% high psychological distress 64.7% mild–moderate
Stallman and Shochet (2009)	Students accessing health services in Australia (n=1168)	K10	41.1% of students attending health services met criteria for psychological distress 8.9% suggesting Severe Mental Illness and 11.8% Moderate Mental Illness.
Rosenthal and Wilson, (2008)	American cohort of university students (n=1.773)	Trauma Symptom Inventory	9% clinically significant levels of psychological distress 74% moderate distress

#### 6.1.5 Aims for the current study

The present study aims to investigate musicians' psychological illbeing. In the context of exploring the *Dual continua model* of mental health expounded in Chapter 2, it is assumed that a complete profile of musicians' wellbeing involves both indicators of *positive mental health* and indicators of illness. Non-specific psychological distress was chosen as the main indicator due to its widespread use across studies with similar aims and crucially, given its potential to estimate serious mental illness.

The present study was built to answer the second and third overarching questions for this project, Research Question 2 (RQ2) (see Chapter 4): RQ2: What is musicians' mental illness profile? And RQ3: Is musicians' profile of mental health and mental illness in accordance with the theoretical expectations laid out by the *Dual continua model* (Keyes, 2002)?

Acknowledging 1) the distinct developmental challenges of higher education training and professional life as a musician; 2) the general trends on distress in general population and 3) the need to integrate the results of Study 1 on *positive mental health* with data on mental illness for a complete profile, seven aims guided the current study:

1) draw a profile of psychological distress from a large sample of musicians, clarifying the overall rate of high distress, trends for sex and age, and potential differences across different types of musical activity (RQ 2.1; RQ 2.2; RQ 2.3; RQ 2.5);

2) investigate trends in psychological distress for professional musicians (RQ 2.4)

3) compare professional musicians' distribution of psychological distress with that of other occupational samples (RQ 2.5);

4) investigate trends in psychological distress for music students (RQ 2.4);

5) compare music students' distribution of psychological distress with that of other student samples (RQ 2.7);
6) compare musicians' overall psychological distress indicators with those of other performing artists (RQ 2.8)

7) bring musicians' psychological distress and *positive mental health* scores together to verify if musicians' profile meets the theoretical expectations proposed by the *Dual continua model* (Keyes, 2002) (RQ 3.1).

To capture the musician population as well as is possible, the same cross-sectional approach adopted in Study 1 was used. Inevitably, due to the large-scale sample, self-report was chosen. The next section details the study's method.

# 6.2 Method

This section presents the method for the present study. It will start by describing the instrument used, its purpose, psychometric properties and the justification for its inclusion. This will be followed by the description of the study's participants. The section ends with considerations on data preparation and analyses.

# 6.2.1 Instruments: The Kessler Psychological Distress Scale (K6)

# 6.2.1.1 Purpose

The *Kessler Psychological Distress Scale* is one of the most widely used short scales in epidemiological studies to screen for *Non-specific psychological distress* (NPD) and predict *Common Mental Disorder* (CMD). It is available in a 10-item (K10) or 6-item (K6) version. The K6 is a truncated version of the K10 and has been found to be at least as sensitive as the K10 scale in distinguishing between cases and non-cases of serious mental illness (SMI)<sup>39</sup> (Harvard Medical School, 2005). The K6 scale was designed by Professor Ronald Kessler from Harvard University and published in 1994 (Kessler &

<sup>&</sup>lt;sup>39</sup> A classification of SMI requires meeting the criteria for at least one 12-month DSM-V/SCID disorder, other than substance use disorder, and a Global Assessment of Functioning (GAF) score under 60 (Kessler et al., 2003).

Mroczek, 1994), with a subsequent revision in 2001. It was developed for use as part of the annual US National Health Interview Survey, a national survey of about 50,000 households for gathering data on the health of the population in the United States.

The scale emerged from the need to develop measures that would help distinguish between severe and less severe mental disorders, to clarify provision needs. As Kessler et al. (2002) point out, the criteria for SMI call for not only a DSM diagnosis but also specific indicators of severity. In the US, less than a third of the individuals who meet criteria for a DSM disorder meet the severity indicators for SMI (Kessler et al., 1996). This key distinction between classifying cases on the basis of severity rather than just on diagnosis has led to increased attention on dimensional measures of NPD.

The measure has now been widely used and has provided national and state-level estimates of SMI, informing funding (Grant et al., 2010; Kessler et al., 2003; Kessler et al., 2002). K6 validation studies have been widespread across countries and have uniformly found high concordance with independent clinical ratings of SMI (Furukawa et al., 2003, 2008; Kessler & Mroczek, 1992; Kessler et al., 2010; Patel et al., 2008; Yiengprugsawan et al., 2014).

Besides being incorporated in the annual US National Health Interview Survey, the US National Household Survey of Drug Abuse and the Canadian National Health Interview Survey, the scale has also been adopted by the World Health Organization in the World Mental Health Survey (Kessler et al., 2010). In addition, as reviewed in section 6.1, it has been used in prevalence studies with occupation health profiles and with student samples, which are both of interest to the current study.

The K6 consists of six questions that ask respondents to rate on a 5-point Likert scale how frequently they have experienced each of six symptoms of psychological distress, using the response options `never', `a little of the time', `some of the time', `most of the time', and `all of the time'. A reference period is used with either the past month (where participants are asked to rate how often the symptoms occurred in the previous 30 days) and/or the worst-month (where participants are asked about the 30-day period during the past 12 months when they experienced greatest severe psychological

distress). As Kessler et al. (2010) highlight, some surveys use one of the recall periods and some use both, a decision entirely dependent on the study's purpose. The scale contains five additional questions considered supplementary and not required for the standard scoring. These assess the distribution of absenteeism (days totally unable to work) and presenteeism (days able to work but in less than full capacity) among those identified as 'severe' using the K6. Question 6 ("During the past 30 days, how often have physical health problems been the main cause of these feelings?") is a measure for organic exclusion, where if someone answers that physical issues are "most" or "all of the time" the reason for their feelings on the K6, it may be relevant to exclude them (Kessler, Personal communication, January 2019). The K6 can be self-administered or interviewadministered and takes 2 to 3 minutes to complete (Kessler et al., 2002). The full scale is presented in Appendix 6.1.

#### 6.2.1.2 Scoring and Psychometrics

One way of scoring the K6 is using the unweighted sum of responses, rated from 0 to 4 (0 = none of the time, 1 = a little of the time, 2 = some of the time, 3 = most of the time, 4 = all of the time), generating a total scale sum score with a range of 0–24. High scores indicate high levels of psychological distress (Kessler et al., 2003). A categorical dichotomous scoring of responses of 0–12 versus 13+ has been shown to define CMD with good accuracy, and is widely accepted in discriminating between respondents with and without mental illness (Kessler et al., 2003). However, it has also been argued that there is no universal clinical standard for scoring, and that cutoffs can be derived from population-specific validation studies (Sampasa-Kanyinga et al., 2018).

The K6 has allowed for secure discrimination between clinical cases and noncases of the DSM-V over a wide range of samples (Baggaley et al., 2007; Furukawa et al., 2003, 2008; Kessler et al., 2002, 2003, 2010), and predicts SMI (Furukawa et al., 2003), with overall discriminatory power in detecting affective disorders that outperforms widely used and more extensive screening measures such as the General Health Questionnaire (GHQ-12), the CIDI-SF scale (Composite International Diagnostic Interview Short-Form) and the WHO-DAS (World Health Organization Disability Assessment Schedule). Validation studies incorporating structured diagnostic interviews have demonstrated that the scale holds a sensitivity of .36 (.08) and a specificity of .96 (.02)<sup>40</sup>, with a total classification accuracy of .92 (.02) at the 13 cut off point (Kessler et al., 2003). The values for the area under the receiver operating curve (ROC) are of moderate accuracy (.865 in Kessler et al., 2003) (Lace et al., 2018; Mitchell & Beals, 2011)<sup>41</sup>.

Furukawa and colleagues (2003; 2008) have further proposed a polychotomous classification scheme for the K6, which provides a more refined prediction of independent clinical evaluations of disorder. A calibration study suggested that the prevalence of SMI differs significantly across levels, as follows: scores ranging from 0-7 predict none or mild symptoms, scores 8-12 predict moderate symptomatology and scores over 13 are highly predictive of individuals with serious mental illness (SMI). Accordingly, adding to the continuous sum score and the binary category expounded above, the total sum allows for a further categorization of: "No Mental Illness" (0-7), "Moderate Mental Illness" (8-12) and "Serious Mental Illness" (over 13) (Kessler et al., 2010).

<sup>&</sup>lt;sup>40</sup> Sensitivity and specificity are indicators of accuracy and power for a measure. Sensitivity refers to the proportion

of true cases which are detected in the screening scale while specificity refers to the percentage of true noncases which are correctly classified as such (Fletcher et al., 2014).

<sup>&</sup>lt;sup>41</sup> A customary way to establish the utility of a scale is to compare it to a gold standard (in this case, the K6 against a DSM diagnosis), running receiver operating characteristics analyses (ROC). The ROC curve plots true positives (people classified as having a diagnosis according to the gold standard who are also assessed as cases using the scale in question) against false positives (people without a disorder which the scale classifies as non-cases) over a range of cut-off values. The ROC curve is the graphical representation of the diagnostic ability of the binary classifier system as the threshold for discrimination varies. The area under the curve (AUC) is the main indicator of accuracy, corresponding to the probability that a randomly chosen individual with a diagnosis will have a greater result on the scale than a randomly selected individual without a diagnosis (Pepe, 2003; Mitchell & Beals, 2011; Margolis et al. 2002). Therefore, the AUC evaluates the congruence between the scale and the standard, allowing us to know how well our scale can distinguish between the two diagnostic groups (diseased/normal) (Fletcher et al., 2014). AUC values range from .5 for no power for diagnosis to 1 (perfect instrument) (Johnson, 2004). AUCs of 0.5 to 0.7 indicate low accuracy; AUCs between 0.7 and 0.8 are considered moderate, 8-.9 substantial and 0.9 to 1.0, almost perfect (Pepe, 2003; Cairney et al., 2007).

The K6 has demonstrated robust psychometric properties with high internal consistency (Cronbach's  $\alpha$  = .89) and high construct validity when compared to similar screening tools (Furukawa et al., 2003; Kessler et al., 2002). Additionally, there is evidence of resistance to bias regarding sex and education (Baillie, 2005). The scale items were developed using Item Response Theory (IRT) methods (Hambleton et al., 1991) to maximize precision at the point of the underlying construct of non-specific psychological distress that discriminates cases of serious mental illness from non-cases and to select questions with optimal sensitivity (Kessler et al., 2002)<sup>42</sup>. The scale questions all load highly on a first principal factor of non-specific distress among general population (Kessler et al. 2002).

#### 6.2.1.3 Justification for inclusion

The *Kessler Scale of Psychological Distress (K6)* was selected for this study for its ability to provide accurate indicators of illness in a short period of time. The *Mental Health Continuum Scale* (core measure of Study 1) positioned musicians on the mental health continuum and provided both quantitative and categorical indications on mental health. The K6 scale assesses musicians' risk of mental illness, providing also both continuous and categorical information on clinical relevance of NPD, enabling therefore the clarification about the illness continuum needed for the profile this project aims to draw.

The six-item version (K6) was chosen given its brevity and, crucially, taking into account that its brevity did not compromise its ability to discriminate DSM-V cases from non-cases of SMI. This study used the past month reference period (30 days prior to completing the survey) and not the worst month in the last 12 months period, as the former was more aligned with the goals of the study.

<sup>&</sup>lt;sup>42</sup> Item response theory (IRT) is a key method for evaluating the validity of a scale through estimating parameters for each of the scale's items. It describes the relationship between the latent construct (e.g., NPD), the properties of the items, and the individual's responses. It allows to differentiate the individual's answers to the scale items from their underlying level on the construct under investigation (Yang & Kao, 2014).

To fulfil aim 7 (see section 6.1.5 – *Aims for the current study*) and bring musicians' psychological distress and *positive mental health* scores together to verify if musicians' profile meets the theoretical expectations proposed by Keyes (2002), the MHC-LF was used. A full description of the MHC-LF is presented in section 5.2.1.1.

## **6.2.2 Participants**

The recruitment strategy for the overall project is described in Chapter 4. A total of 1602 participated in the present study, with 1191 (74.3%) providing a full data set. Of the total sample, 982 (82.6%) were musicians and the remaining (n = 209) worked in other performing arts (theatre and dance). Seven participants further reported their main source of activity to be outside of the performing arts and were excluded from the study, leading to a total of 202 participants in the 'other performing arts' group. Of the 982 musicians, 77.4% were professionals (n = 760) and 22.6% were music students (n = 222). 61.1% (n = 600) of the participants were women and 38.9% (n = 382) were men. The bias towards women was particularly strong among students, with women representing 72.9% of student respondents (n = 162); among professionals 57.6% (n = 438) were women and 42.4% (n = 322) were men. Ages ranged from 18 to 87, with a median of 35 and a mean of M = 37.7 years (SD = 14.2), with students mostly represented in the younger categories, as expected. Frequencies per age category, according to the life cycle categorization (Statistics Canada, 2007), are presented in Figure 6.1.



Figure 6.1. Frequencies per age category split by professionals and students

Participants represented 64 nationalities, across the five continents. Europe was the most represented continent, accounting for 57.1% of the sample, followed by North America with 22.1%, South America with 10%, Oceania with 5.7%, Asia with 3.3% and Africa with 1.4%. British (n = 180) and American (n = 176) were the most represented groups, with 18.4% and 18% respectively. The full distributions per nationality by country and continent are presented in Appendix 6.2 and 6.3.

For geographical region of work/study, Europe was also the most represented, with 60.1%, followed by North America with 21.9%, South America with 5%, Oceania with 4.5%, Asia with 2.1% and Africa 1%. In addition, 5.3% of the sample reported working internationally and not being based at one particular country alone. Forty-eight countries of work/study were represented. The UK was the most represented accounting for 24.4% of the overall sample, followed by North America with 18.3%. Full distributions regarding geographical area of work/study are presented in Appendix 6.4 and 6.5.

Participants were asked to describe their main activity, as the one in which they spend the majority of a typical week engaging with. Among the professionals, 45% (n = 342) were primarily engaged in performance, 36.3% (n = 276) in teaching, 12.8% (n = 97) in composing and 5.9% in conducting (n = 45). Table 6.3 presents the frequencies for

each category of activity. The 276 teachers were spread across different teaching levels, with the majority accumulating more than one level; 95 (34.4%) taught in specialist music schools (HE conservatoires and Junior conservatoires); 138 taught at high school level, 128 middle school and 113 up to elementary school.

ACTIVITY		FREQUENCY	PERCENT	
	Soloist	90		
	Ensemble – orchestra	131		
PERFORMER	Ensemble – choir	26	34.7	
	Ensemble – chamber instrumental	42		
	Ensemble – other	53		
COMPOSER		97	9.9	
CONDUCTOR		45	4.6	
TEACHER		276	28.1	
STUDENT		222	22.7	
TOTAL		982	100	

Table 6.3. Frequencies and percentages per principal area of activity in music

Table 6.4 presents the distribution per area of primary specialism. Strings were the most represented group with n = 217 (22.1%), followed by keyboard instruments (piano, harpsichord and organ) with n = 180 (18.3%).

Table 6.4. Frequencies and percentages per category of primary specialism

	FREQUENCY	PERCENT
Strings	217	22.1
Woodwinds	170	17.3
Brass	65	6.6
Keyboard	180	18.3
Voice	157	16.0
Percussion	11	1.1
Composition	114	11.6
Conducting	48	4.9
Music Theory, Ear Training	19	1.9
Missing	1	.1
TOTAL	981	100

From the professionals in the sample (n = 760), 757 provided further details about their professional situation: 34.1% (n = 258) reported being on a contract, 62.3% working on a freelance basis (n = 472), 2.4% (n = 18) on both contract and freelance work, 0.7% (n = 5) retired and 0.5% (n = 4) working without being paid. The frequency table for professional situation is presented in Appendix 6.6. Table 6.5 presents the frequencies per category of years of professional experience. The majority of professionals (n = 303, 39.9%) had over 20 years of professional activity in music.

YEARS	FREQUENCY	PERCENT	
fewer than 5 years	71	9.3	
5-10 years	132	17.4	
10-15 years	127	16.7	
15-20 years	127	16.7	
more than 20 years	303	39.9	
TOTAL	760	100	

Table 6.5. Frequencies and percentages by category of years of professional experience in music

The large majority of the sample reported working in classical music as their primary genre (n = 883, 91.2%), followed by jazz for n = 32 (3.3%), pop music for n = 27 (2.8%) and other genres accounting for 2.4% of the sample which included traditional folk music, blues and world music. The full frequency distribution for musical genre is presented in Appendix 6.7.

Despite having music as their main activity on a typical week of work, 28.8% of the sample (n = 218) reported maintaining a parallel career. The most represented occupations were arts administration (12.8%) and teaching (outside music) (9.6%). The full frequency distribution per parallel career areas is presented in Appendix 6.8.

A significantly greater proportion of soloists and choral singers were engaged in parallel professions compared to all their counterparts (38.5% e 37%, respectively), with

conductors showing the smallest proportion (11.1%), followed by teachers (16.3%), chamber musicians (19%), orchestral players (23.7%) and composers (28.9%) (*LRT* = 16.51, d.f. = 7, p = .021). Within each area of activity, there were no differences across the different instruments in the proportions of those engaging in a parallel profession (*LRT* = 12.57, d.f.=8, p = .13). 30% of freelancers were engaged in parallel professions compared to 11% of contract holders (*LRT* = 30.15, d.f. = 1, p <.0001). There was a tendency for the engagement with parallel professions to increase with age: the Odds Ratio of engaging with a parallel profession in relation to not doing so, for each year of age, was 1.025 (95% CI: 1.004 -1.0459, *LRT* = 5.66, df = 1, p = .02). Years of professional experience (*LRT* = 3.25, df = 4, p = .52) and sex (*LRT* = .39, d.f. = 1, p = .53) were not significant in predicting engaging with a profession outside of music, when all other variables were controlled for.

#### 6.2.3 Data preparation and analyses

Only full datasets with regards to the variables of interest for the study were used: K6 score (all items), sex, age, area of activity in music, and status as professional or student. The two optional questions made to professionals, concerning freelance/contract status and engagement or not in a parallel profession, led to several missing data points as not all musicians chose to answer. For these two variables, analyses were run with the sub-sample who provided full data. Continent of work/study was only used descriptively and taken out of further analyses due to the highly unbalanced sample sizes across groups. No univariate outliers were removed given that they did not affect any assumptions.

The K6 score was used as dependent variable both in its continuous and categorical forms, following both the dichotomous categorization (over/under 13 to define SMI) and the cut-off criteria suggested to define no mental illness, moderate mental illness and serious mental illness (Furukawa et al., 2003).

Guided by the study aims, analyses were performed for the total sample and for professionals and students separately. All analyses were performed with natural log transformation due to right skewness. Descriptives were run for all variables of interest. Independent-sample t-tests and one-way independent ANOVAs were run to compare means across groups. Welch tests were used where appropriate, if homogeneity of variances could not be assumed. Multivariate analyses with stepwise deletion were run to explore the behaviour of the K6 score across variables of interest. Model selection was evaluated using the Akaike Information Criterion (AIC). Exploratory models were fit with all combinations of unique predictors. This resulted in two models for all data, three models for professionals and one model for students. The different variables used for each set of analyses are presented in Appendix 6.10. Initial models were built with independent terms and any meaningful interactions between them. Variables were removed one by one through stepwise deletion based on AIC, until only significant terms remained. The significance threshold used was .05, while any variables close to this threshold were discussed as potential effects.

Analyses with age were initially fit as general additive models (GAM) to check for non-linear relationships. Estimated degrees of freedom (edf) for all GAM models were 1 so fitted general linear models (GLMs) were used instead. Collinearity between the variables in the initial models was assessed through variance inflation factors (VIF) and model assumptions were verified graphically.

For analyses concerning the K6 categories, logistic regression analyses between categories 1 (no distress) and 2-3 (moderate or severe distress) were run, with the same predictors and procedures described for the K6 score.

A GLM with gaussian errors was fitted to compare the K6 score between musicians and other performing artists, controlling for the effects of sex and age. Independentsample t-tests using summary values were used to compare K6 scores with results reported in studies with other groups of interest. Z-score tests of proportions were used to compare musicians' percentages across K6 categories with those reported in other studies. Crosstabulation analyses of NPD and PMH data were run to ascertain if our data met the theoretical expectations of the *Dual continua model* (Keyes, 2002). SPSS v.25 (IBM Corp., Armonk, NY, United States) and R Studio (RCore Team, 2020) were used for analyses.

# 6.3 Results

This section is organized following the research questions set out for Study 2. First, the exploration of musicians' psychological distress profile, as assessed by the *Kessler Scale of Psychological Distress*, is presented for the total sample (RQs 2.1, 2.2 and 2.3). This is followed by the profiles for professional and student musicians (RQ 2.4). Thirdly, musicians' scores are compared to the general population (RQ 2.5) and to other occupational and student samples (RQs 2.6 and 2.7). Given the absence of previous work on NPD within the performing arts, we then compare musicians' scores with the data that was collected from other performing artists (RQ 2.8).

Finally, we bring musicians' psychological distress and *positive mental health* scores together to verify if our musicians' profile meets the theoretical expectations proposed by the *Dual continua model* (RQ 3.1).

# 6.3.1 Psychological distress profile for the total sample

The mean result for K6 was 6.59 (SD = 4.66), with a median of 6 and scores ranging from 0 to 24. Internal consistency was good, with a Cronbach's alpha value in line with previous K6 studies ( $\alpha = .866$ ). Item inter-correlations ranged from .399 to .696 (see Appendix 6.9 for correlation matrix).

In line with previous studies (Andrews & Slade, 2001; Kessler et al., 2002), the distribution of the K6 total score was moderately positively skewed (skew of 1, SE = .08), with the majority of musicians meeting the criteria for no mental illness (64.4%); 11.7% of respondents obtained a score above 13, the cut-off suggested for serious mental illness, and 23.9% scored within the range indicative of moderate mental illness.

Figure 6.2 shows how the K6 score was distributed across the three K6 categories: *No mental illness* (NMI), *Moderate mental illness* (MMI) and *Severe mental illness* (SMI). Musicians in the *Severe mental illness* group score mainly at the lower end of the category range: 50% of respondents in this category had a K6 score of 15 or less. However, there is greater variability in this group with the top 25% of respondents split across a much greater range than that of the other two groups. This is not surprising considering that the SMI category encompasses a wider range of values, but it is interesting to note that very few participants (n = 11) scored above 20. Those on the MMI group also tend towards the lower end of the category range. Those on NMI category are concentrated mostly at its higher end.



Figure 6.2. K6 scores across the three categories for all musicians (top) and split by professionals and students (bottom); diamonds represent the mean and box sizes are adjusted for sample size.

Figure 6.3 shows the distribution of K6 categories across the different variables studied. Women, young musicians, students, percussionists and those working in Oceania seem greatly represented in the severe mental illness category, while conductors and those based in Africa or with inter-continental working patterns seem particularly less represented (though cautiously noting the very small sample sizes for Africa, Asia, Oceania and Percussionists).



Figure 6.3 Percentages for K6 categories by sex, age, student/professional status, specialism and geographical area of work/study.

# 6.3.1.1 Sex

The K6 summative score mean for females (7 ±4.76, *SE* = .19) was significantly higher than that for males (5.95, ±4.42, *SE* = .23), t(981) = 3.37, p = .001. Cohen's d indicated a small difference (d = .227). Table 6.6 presents the distribution for men and women across the K6 categories.

		K6 Category			
		No Montol	Moderate Severe		
		Illness	Mental Illness	Mental Illness	Total
Sex	Female	362	158	80	600
	Male	270	77	35	382
Total		632	235	115	982

Table 6.6. K6 category frequencies by sex

There was a significantly lower percentage of women in the NMI category (60.3% compared to 70.6%) and a significantly higher percentage of women in the MMI category (26.3% compared to 20.2%) and in the SMI (13.3% compared to 9.1%; *LRT* = 11.03, d.f. = 1, p = .0009).

# 6.3.1.2 Age

Age was the strongest predictor of the K6 score, with distress decreasing as age increases (F(1,981) = 128.6, p < .0001,). The extent of the effect is displayed in Figure 6.4. The result of the GAM analysis suggests that the relationship between age and log K6 is linear (edg = 1). Figure 6.4 also shows this pattern, split by sex. Although the interaction between sex and age is non-significant at .05 (p = .084), the figure shows a tendency for greater differences between sexes among younger musicians.



Figure 6.4. Relationship between K6 score and age, for women and men with confidence intervals

Differences among age categories are presented in Figure 6.5 below<sup>43</sup>. Except for a very slight increase between the 60-64 group and another increase for over 85 (though note the negligible sample size of n = 2), the tendency to decrease with age is evident.

<sup>&</sup>lt;sup>43</sup> The life cycle age categorization was used (Statistics Canada, 2007), to allow for a detailed look at key developmental points of interest (e.g. transition to adulthood and to old age).



Figure 6.5. K6 total score per age category

For the analysis of the K6 categories, no interactions were tested due to the unbalanced and relatively small sample sizes in the *moderate* and *severe* categories. The logistic regression suggested an effect of sex and of age, with women being 1.5 times (CI 1.05-1.86, p = .021) more likely to classify for any level of distress (MMI and SMI combined) compared to men, and the odds of being in the mentally distressed categories decreasing by 4% for each year of age (*OR* = .96, CI .95-.97, *p* <.0001).

A significantly higher proportion of professionals classified for the NMI category (68.9% compared to 48.6% for students), and a higher proportion of students for the MMI category (33.8% compared with 21.1%) and SMI (17.6% compared to 10%; *LRT* = 29.94, df = 1, p < .001, Figure 6.6).



Figure 6.6. Percentages for the K6 categories for Professionals and Students

There was a significantly higher K6 score for students (8.23, ±4.95) when compared to professionals (6.12 ,±4.46) (*Welch t* (332.55) = 32.46, p <.001, d = .45). However, it is clear that this difference is driven by age, as it is no longer significant if age is controlled for (F(1, 981) = .21, p = .65).

The differences for the K6 score across the varied areas of specialism were significant (F(8,973) = 2.49, p = .011) but not when the effect of other variables were controlled for (full analysis in Appendix 6.10).

# 6.3.2 Psychological distress profile for professional musicians

A one-way ANOVA revealed no significant differences in K6 mean scores across types of professional activity. Results among professionals showed that effects of sex, age, area of specialism and years of experience were significant predictors when analysed separately. However, when combined in the multivariate analysis, only the effect of age remained significant (F(1, 759) = 87.5, p < .0001,  $r^2 = .1$ ) (the full analysis is displayed in Appendix 6.10).

Figure 6.7 shows the distribution across K6 categories among professional musicians. Besides sex, age, area of professional activity and primary specialism, the figure shows patterns for years of professional experience, geographical area of work, contract/freelance status and parallel career status.



Figure 6.7. Percentages across NMI, MMI and SMI for sex, age, area of activity, specialism, years of professional experience, continent of work, contract/freelance status and parallel career status among professionals (n = 760)

The patterns for professionals are similar to those of the whole sample, as expected given their representation, though the proportions of women and men in the SMI group are closer for professionals and the proportion of percussionists in the same category is even more pronounced. Professional conductors also seem to be less represented in the SMI category.

No interactions were tested due to the unbalanced and relatively small sample sizes in the MMI and SMI categories. The logistic regression suggested an effect of age on psychological distress, which follows the same pattern as the one seen for the total sample with the likelihood of classifying for mental illness decreasing 4% for each year of age (*LRT* = 65.09, *OR* = .96, CI .95-.97, *p* <.0001).

#### 6.3.3 Psychological distress profile for music students

In the student sub-sample (n = 222), for the K6 summative score, none of the variables tested (sex, age and area of specialism) yielded significant effects on psychological distress, although there was a small p-value for sex (p = .068). Figure 6.8 suggests that this is mainly due to the female string players who show a significantly higher score compared to their male counterparts and women percussionists showing a significantly lower score.

Overall, 48.6% of students (n = 108) classified for *No Mental Illness*, 33.8% (n = 75) for *Moderate Mental Illness* and 17.6% (n = 39) for *Severe Mental Illness*. It is of particular interest to note the 33.8% MMI group. The median for this group was 10, in the centre of the category, denoting there is no tendency for borderline cutoffs to be highly represented.

Figure 6.8 shows the distribution across the K6 categories for the three variables studied among students: sex, age and primary specialism.



Figure 6.8. Percentages for NMI, MMI and SMI for sex, age category and primary specialism for music students (n = 222)

The patterns across specialisms are different to those of professionals, with woodwind and brass students showing a greater representation on the *moderate* and *severe* categories of distress. However, sample sizes are very small for some of the groups (e.g. brass), limiting the pattern observation.

Due to the unbalanced and relatively small sample sizes in the MMI and SMI categories, no interactions were tested for the analyses of the K6 category distributions. Sex was found to not be a significant K6 score predictor overall (p = .068), as mentioned above. However, when analysing the categories, female students were found to be 2.24 times more likely than male counterparts to meet the criteria for psychological distress (MMI and SMI categories combined) (*LRT* = 6.73, d.f. = 1, p = .009, *OR* = 2.24 (1.22-4.19)). The median for women was 8 (just above the 7 cut-off for MMI) and for men 6 (just under the cut-off).

# 6.3.4 Comparisons between musicians and other occupational groups

Table 6.7 presents a list of studies from the past five years, providing estimates for psychological distress for varied occupational groups including medical doctors, nurses, taxi drivers, construction workers, miners and the army. The studies were chosen for using the same reference time period of "distress in the past month", the same mode of assessment (anonymous survey) and either the K6 or the K10 scale<sup>44</sup>. Proportions are compared using 2-sample Z-score proportion tests and mean scores, where available, are compared using summary-values independent samples t-tests.

Table 6.7. Comparisons between professional musicians' NPD results and those of other
occupational health studies

Professional group	N	Study results	<b>Comparison</b> <sup>45</sup>		
Doctors	12252	16.4% SMI	Higher proportion for doctors,		
(Telethon Institute for			z = 4.6669, p < .001		
Child Health Research.,					
2019)					
Mining and construction	1124	28% SMI	Higher proportion for mining and		
workers (Bowers et al.,			construction workers,		
2018)			<i>z</i> = 9.4536, <i>p</i> is < .001		
Nurses	581	92.3% SMI &	Higher proportion for nurses,		
(Feng et al., 2018)		MMI	z=22.7844, <i>p</i> < .001		
Miners	1799	16.9% SMI	Higher proportion for miners,		
(James et al., 2018)			z = 4.4851, p < .001		
Australian Army	24481	51% at least	Higher proportion for the army,		
(Searle et al, 2017)		moderate	z = 10.8603, p < .001		
		distress			
Taxi drivers	380	61% SMI	Higher proportion for taxi drivers,		
(Davidson et al., 2017)			<i>z</i> = 18.2841, <i>p</i> is < .001		
Nurses	789	K6 <i>M</i> = 7.7	Higher mean distress for nurses,		
(Kunie et al., 2017)		(SD = 5.29)	t(1547) = 6.344, p < .001		

<sup>&</sup>lt;sup>44</sup> As mentioned in section 6.2.1, the K6 is a nested version of the K10. The K10 allows for a similar estimation of SMI. A direct comparison has found equivalence between the K6 and the K10 for assessing NPD in a general population sample (Furukawa et al., 2003).

 $<sup>^{45}</sup>$  Comparison with professional musicians' scores (n = 760), 10% SMI, 31.1% SMI & MMI combined; M = 6.12 (±4.46).

These comparisons are only indicative and need to be taken with caution, given all the potential methodological differences across studies already highlighted in section 6.1. In particular, sampling strategies, timelines for completion of the survey and the way the study is described. However, it is of interest to observe broad indicators across sectors from studies with similar criteria, in order to situate professional musicians' scores.

All studies included report a higher prevalence of SMI when compared with professional musicians. One of the studies (Kunie et al., 2017) only reported the mean K6 score and this was also found to be significantly higher than the mean score found for professional musicians.

# 6.3.5 Comparisons between music students and other student groups

Table 6.8 presents a list of studies from the past five years, providing estimates for psychological distress for student samples. Similarly to the procedure for professional musicians, the studies were chosen for their similarity with the present study.

Student Group	Ν	Study Results	Comparison		
Medical Students	126	12.1% SMI	No significant difference.		
(Dendle et al., 2018)			<i>z</i> = -1.3586, <i>p</i> = .17384		
Medical and psychology	560	Medicine: 18% SMI	No significant difference,		
students	(384 med.,	Psychology : 28%	<i>z</i> =.1239, <i>p</i> = .90448		
(Bacchi and Licinio,	176 psy.)	SMI	No significant difference, z is		
2017)			2.4795. <i>p</i> = .01314.		
Medical students	127	18% SMI; 31% MMI	No significant difference,		
(Bore et al., 2016)			<i>z</i> =.0941, <i>p</i> = .92828		
Undergraduate college		9.2% SMI	Higher proportion for music		
students	195	59.9% moderate	students, <i>z</i> = -2.4912, <i>p</i> = .01278.		
(Knowlden et al., 2016)		mental distress			
		Mean K6 score was	Higher mean K6 score for music		
		6.82 ( <i>SD</i> = 4.60,	students, <i>t</i> (415) = -2.997, <i>p</i> <.01		
		Median 6)			

Table 6.8. Comparisons between music students' K6 scores and other student samples

The tendency for music students, when positioned in the context of similar studies with other student samples, is contrary to what is observed for professionals. Music students' distress scores are either similar or more severe than other student groups. Most studies used for comparison investigated medical students, a group traditionally associated with concerning rates of distress (Maser et al., 2019). Music students seem to present comparable proportions of SMI to medical students.

# 6.3.6 Comparisons between musicians and other performing artists

Besides situating professionals and students in relation to other occupational and student groups respectively, there is a particular interest to investigate musicians' trends in relation to areas of activity which are closer to music, in the behavioural routines they entail (i.e. artistic practices). Thus, performing artists are of special interest to this study. For this purpose, a sample of performing artists from dance and theatre (including musical theatre) was recruited (see Chapter 4 for recruitment details). 202 participants provided a full dataset. Of these, 60% (n = 121) were dancers and 40% (n = 81) were actors, with a mean age of 32.8 years (±12.2), a median of 29, and a range from 19 to 71 years; 80.2% (n = 182) were women, 19% were men (n = 38) and 2 participants chose to not reveal their sex. Similarly to the musicians' sample, the majority of dancers and actors were professionals (65.3%, n = 132) with the remaining currently training as dance and theatre students (34.7%, n = 70). Twenty-seven nationalities participated, with British accounting for 44% of the sample, followed by American at 14.5%. Similarly to the musicians' sample, most participants worked in the UK (47.5%), followed by the USA at 12.9%, with the remaining participants spread across 16 other countries; 72.8% of the sample was based in Europe, 16.8% in North America, 2.5% in Oceania, 1% in South America and 6.9% maintained an international working pattern.

Figure 6.9 presents the mean K6 score and standard errors for musicians ( $M = 6.59 \pm 4.66$ , SE = .14), dancers (M = 7.46,  $\pm 4.56$ , SE = .41) and actors (M = 8.35,  $\pm 5.11$ , SE = .56). The K6 mean score was significantly different across groups (F(2, 1181) = 6.57, p = .001,  $\eta^2 < .01$ ). When controlling for sex and age, however, these differences were no longer significant (F(2, 1174) = 2.64, p = .072,  $\eta^2 < .01$ ).



Figure 6.9. K6 mean scores and standard errors for musicians, dancers and actors

Figure 6.10 presents the distribution across K6 categories for musicians and other performing artists (dancers and actors combined).



Figure 6.10. Percentages across K6 categories for musicians and other performing artists

Percentages for the two groups were significantly different in an initial contingency table analysis ( $\chi^2(2) = 8.71$ , p = .013). However, post-hoc analyses using the adjusted residuals (Beasley & Schumacker, 1995) with Bonferroni correction to account for multiple comparisons revealed no significant differences.

A closer look at each scale item (Figure 6.11) reveals that the three groups maintain a similar pattern. Musicians tend to stay closer to dancers. However, analyses of co-variance controlling for the effects of sex and age revealed no differences across groups, with the exception of the restlessness item, for which musicians scored significantly higher when compared to actors, though note the small effect ( $M = 3.46, \pm .98$  vs  $M = 3.24, \pm 1.01$ ; F(2, 1174) = 5.82, p = .003,  $\eta^2 = .091$ ).



Figure 6.11. Means and standard errors for each K6 item for musicians, dancers and actors.

Overall, musicians do not seem to hold significantly different K6 profile trends when comparing to other performing artists.

# 6.3.7 Psychological distress and positive mental health

A total of 963 musicians provided a combined complete dataset for the K6 and the MHC-LF. Pearson correlations between the K6 and all MHC-LF sub-scales were negative, and significant at p = .001. The strongest observed correlation was with the emotional wellbeing sub-scale (r(961) = -.650), followed by the sub-scales of *Self-acceptance* 

(r(961) = -.564), Environmental Mastery (r(961) = -.553), Social Contribution (r(961) = -.405), Positive Relations (r(961) = -.399), Social Integration (r(961) = -.385), Social Coherence (r(961) = -.384), Autonomy (r(961) = -.334) and Positive Growth (r(961) = -.301). The remaining sub-scales showed very weak associations with the K6 score: Social Acceptance (r(961) = -.284), Social Actualization (r(961) = -.259) and Purpose in Life (r(961) = -.152).

Table 6.9 shows the contingency table of the two categorical distributions. The expected frequency assumptions were met, with less than 20% of expected counts under 5 (Howell, 1987) (see Appendix 6.11 for full table).

# Table 6.9. Crosstabulation MHC-LF \* K6 for the total sample of musicians (professionals and students)

		Positive Mental Health Category (MHC-LF)				
		Languishing Mod. Mental Health Flourishing T		otal		
					Ν	(% <sup>46</sup> )
K6 Category	NMI	47a	351b	226c	624	(64.8%)
	MMI	76a	135b	18c	229	(23.8%)
	SMI	70a	37ь	3c	110	(11.4%)
Total N		193	523	247	963	
%		20%	54.3%	25.6%	100%	)

Each subscript letter denotes a subset of MHC-LF whose column proportions do not differ significantly from each other at the .05 level;  $\chi^2 = 260.740$  (4), p<.0001 (two-tailed)

Results are in line with the theoretical expectations outlined by Keyes (2002). Proportions for each K6 category were significantly different across the three MHC classification groups, as expected. Of the group of musicians classifying for *Severe Mental Illness*, 2.7% simultaneously classified as *Flourishing* and 33.6% as *Moderate Mental Health*. 63.6% of the SMI group classified as *Languishing*. Within the musicians classifying

<sup>&</sup>lt;sup>46</sup> Please note a slight difference with previously reported percentages when comparing to the general population, due to the different sample sizes (this table refers to the participants who answered both instruments).

for *Moderate Mental Illness* (MMI), 59% simultaneously classified for *Moderate Mental Health* and 7.8% for *Flourishing*. 7.5% of musicians with *No Mental Illness* were also *Languishing* (experiencing low mental health). Overall, the *Dual-continua model* expectations were confirmed with our data.

# 6.4 Discussion

The purpose of Study 2 was to assess musicians' mental illbeing. The construct chosen was non-specific psychological distress, given its status as a strong predictor of clinically significant mental illness. The study aimed for a description of a general profile looking at trends within professional and student sub-samples and comparisons with relevant groups. It also aimed at an integration of mental illness status data with the *positive mental health* data from Study 1. This section presents considerations on the main results of this study, limitations and suggestions for further research.

#### 6.4.1 Overall NPD profile

The general profile of musicians' non-specific psychological distress, along with its mental illness prevalence estimate, is very encouraging. The large majority (64.4%) presented no indicator of psychological distress in the past 30 days, and the 23% who scored high enough for moderate levels of NPD, were largely borderline to no distress. Overall, 88.3% of the sample did not qualify for clinically significant severe distress. Another encouraging result is the pattern observed for the group who did present a score predictive of SMI. The large majority within this segment also stood on the lower limit of the category. From the total sample, only 11 musicians scored 20 or above in the K6. This indicates that only around 1% had experienced very high levels of distress in the previous 30 days.

This result may come as a surprise when taking into account that 34.7% of the sample work as performers, with a further 22.2% being students and likely engaging regularly in performance as part of their programmes. This makes a total of 56.9% of the

sample frequently experiencing performance. Given the high prevalence rates of MPA reviewed in Chapter 3, we would expect a more pervasive experience of NPD to be reported. This brings informative insight into both the assessment of MPA and its impact on musicians' overall psychological functioning. As discussed in Chapter 3, the researchbase on MPA is incoherent, as divergent criteria are used across studies, including different timeframes for symptoms, varied levels of intensity and impairment, and even different definitions of MPA altogether. It is not clear how much of the reported figures on MPA validly represent a clinically significant scenario of social phobia, which would be in accordance with the classification suggested by the DSM (American Psychiatric Association, 2013). Most importantly, however, it seems to be assumed that experiencing MPA is equivalent to qualifying for mental illness, which is theoretically and empirically inaccurate. MPA is an experience of distress that is situationally contained and, depending on the level of functional impairment, may or may not be considered psychopathological (American Psychiatric Association, 2013). There is to date no empirical evidence on the generalizability of MPA to overall functioning. MPA does not necessarily portray clinically significant cases, but high NPD does. So in that respect, two main conclusions can be taken from Study 2.

First, if high numbers of musicians are reporting distress related to performance (MPA) that seem to be much higher than general distress figures (NPD), it can be argued that MPA is indeed expected to be, at least partially, independent from overall psychological distress. That is, musicians may experience MPA without experiencing NPD or having generalized distress. Furthermore, even if there are levels of general distress that are explained by MPA, they are probably not high enough to predict mental illness (which in our sample only happened for 11.7%, and on borderline levels with moderate, non-clinical, distress). This brings us to question the apparent centrality that has been given to MPA in musicians' wellbeing studies. Being mentally ill as a musician is different from experiencing some level of MPA. For any conclusion on this we need to 1) assess how clinically significant MPA is and if it qualifies as psychopathology for that particular sample and 2) enlarge our scope of assessment to enable the prediction of *Severe mental* 

*illness*, a much more informative screening altogether. Musicians would largely benefit from greater research efforts towards assessing general psychological functioning, not just situational anxiety.

Accordingly, another important result from the current study is that there were no differences in NPD across areas of activity. Performers were not more distressed when compared to musicians engaged in other activities. If MPA was indeed as limiting to psychological health as has been portrayed, we would expect this group to report particularly high levels of distress and, crucially, higher than that reported for the remaining groups. This again questions MPA's popularity in musicians' mental health research. All specialisms seem to experience similar levels of distress and differences have to do more with variables common to all populations (sex and age) than with occupation-specific characteristics.

The results for teachers are also of interest. Previous research comparing psychological health of 26 professions (Johnson et al., 2005) evidenced teaching as one of the top six most distressful activities. In the present study we found that teachers didn't show a high level of distress overall, along with no differences when comparing with other areas of activity in music. The comparison with Johnson et al. (2005)'s trends remains limited due to a disparity in the scales used. However, this raises discussion points around learning cultures in the music sector. Music education at a professionalizing level (where most of our teaching sample work), is centered on a one-to-one model, arguably entailing unique dynamics when comparing to general HE teaching. It may be of interest to explore how the differences across general HE and conservatoire teaching approaches may relate with patterns of psychological functioning for teachers.

The overall pattern of having the majority of participants reporting little or no distress is in line with what has been reported for general population (e.g. Kessler et al., 2010). Overall, prevalence rates for general population are highly varied, as mentioned, ranging from 3.4% to 27.7% (see section 6.1.2 for a review). The normative study for the K6 scale in the US reports much lower rates of SMI when compared to our sample (around

4%). As discussed in section 6.1, the absence of an interviewer in this study and its anonymity are likely to have led to more realistic reporting of emotions (Fushimi et al., 2011). Previous research has highlighted how face-to-face interviewees may be less likely to disclose negative emotions and tend to enhance stereotypical reports of emotion instead of their real experience. This methodological difference impairs valid comparisons. However, overall, even in the US, when looking at community samples there is also high variability. For example, when assessing NPD in general population samples for the different US states individually, the prevalence for SMI ranged from 7.18% in Hawaii to 10.98% in Rhode Island (Scheffler et al., 2007). Additionally, as mentioned, there is high discrepancy in general population prevalence rates across countries, including in more recent studies (see section 6.1). Given that the current study assessed a highly international sample, any comparisons with nationallevel indicators remain limited.

The patterns observed for sex and age are in line with previous research. Overall, women musicians tend to report higher distress, as happens in most studies with other populations across the research-base. The reasons behind this trend are still a debate. It remains unclear if women tend to experience more distress than men or if they just find it easier to report it (Dapreau et al., 2012). Qualitative research with the SMI group would allow clarification of this.

Age stands as the strongest predictor of NPD for musicians, also in line with previous studies, stressing the need for the sector to invest in prevention initiatives with young cohorts. A result deserving close attention is the fairly linear relationship between age and NPD. Previous studies with other groups had suggested a turning point after the so-called emerging adulthood phase (Drapeau et al., 2012). In the present study, despite high variability, no turning points were identified. It remains unclear if the lower distress levels for older musicians are due to greater resilience with time, drop-outs of the less psychologically fit, or both. A cohort longitudinal study will be needed to further understand this pattern.

Finally, another result worth noting is that musicians' illbeing profile is in line with other performing arts. This reinforces, once again, that trends in distress for musicians do not seem to be occupation-specific.

## 6.4.2 Professional musicians' NPD profile

Given that professional musicians accounted for 77% of the sample, it is not surprising that the trends for this group largely overlap with what was described for the whole sample. Age drives the K6 differences among professionals. Three results stand out for this group. First, despite a difference between sexes on the overall K6 score, it seems that female and male representation in the SMI category is more even for this group. This is not in line with what is observed for general population samples but has indeed been noticed in other occupations (Cannuscio et al., 2004). Two explanations have been suggested for this trend. First, the emphasis given when presenting the study (as a wellbeing profile vs a mental illness screening) seems to lead to different response tendencies from men and women and has been seen to impair men's response rates in occupational settings (Sigmon et al., 1997; Stanton et al., 1991). It has also been suggested that females in full employment may already represent a selected group. Given women's proneness to higher distress, some might not manage full employment altogether and therefore not even be represented (Cannuscio et al., 2004).

A second result deserving attention is the positioning of professional musicians' NPD rates when compared with other occupational groups. Of seven studies looking at NPD with other professionals, all reported a higher prevalence of SMI when compared with professional musicians. These comparisons are only indicative and need to be taken with caution, given all the potential methodological differences across studies already highlighted. However, it is still striking that broad indicators across sectors from studies with similar criteria show other occupations report higher levels of distress than musicians. As discussed in Chapter 3, the limited wellbeing research-base with musicians has intriguingly tended towards a negative tone, stressing the potential challenges and strains of the profession. Interestingly, however, rigorous large-scale assessments of mental illness with musicians are inexistent in the literature. When applying mainstream assessment scales such as the K6 we find that, as a group, musicians are not struggling more than other professionals and might indeed be struggling less.

Finally, the categorization for SMI suggested by the scale authors does not allow to distinguish between a participant scoring far over the set threshold and one scoring barely above it. In our sample of professionals this is particularly relevant, as most participants scoring within the range of SMI fall on the lower end of the category. Therefore, when comparing prevalence rates with other studies, we might in fact be comparing different scenarios of severity. Musicians' profile might therefore be even more positive than it looks. An extremely encouraging result is the low number of professional musicians scoring 20 or higher (n = 6). Only two teachers, two performers and two composers reported these high levels of distress. This represents 0.78% of the sample of professionals. Overall, we can conclude that despite a 10% fraction of professionals classifying for clinically-relevant levels of distress, musicians present a promising profile. First, they do not seem to be more at risk than other occupational groups and second, most distressed musicians are not extremely distressed.

# 6.4.3 Music students' NPD profile

The NPD profile of music students seems less encouraging than that of professionals. Roughly half of the student sample scored high enough for some degree of psychological distress, with 17.6% classifying for severe distress. It is of particular interest to note that 33.8% of students had moderate levels of distress. The median for that group was in the middle of the category (Mdn = 10), meaning students were not borderline to no distress. This highlights the extent of subsyndromal symptoms in higher education that has been previously reported with university samples (Stallman, 2010). The MMI category is of high importance for it represents a risk of transitioning to SMI (Kessler et al., 2003). These are also the students who most likely will fall off the radar of support services, which typically prioritize cases of severe impairment.

Sex differences are in line with previous research: female students are more likely to report distress, either moderate or severe. An interesting result has to do with age. As with previous studies, the differences between students and professionals seem to be explained primarily by age. However, when analyzing the student group alone, despite the linear decrease overall, it seems that within the students' age bracket, these differences are only mild (as can be seen in Figure 6.5). There were 14 mature students (between 30 and 54) and 93% of the sample was under 30. Within the students' sample, the differences across age categories were not significant.

When positioned in the context of similar studies with other student samples, the tendency for music students, is contrary to what seems to be the indication for professionals. Music students' distress scores are either similar or more severe than other student groups. Most studies used for comparison came from medical students, a group traditionally associated with concerning rates of distress (Maser et al., 2019). Music students present comparable proportions of SMI to medical students. As with professionals, there needs to be extra caution when establishing comparisons with other student samples given the different social and institutional contexts, no age-matching guarantees, differences in screening instruments and disparate data collection methods. However, overall, music students seem to follow the trend of academic samples for higher distress than both general population and occupational groups.

## 6.4.4 NPD and positive mental health

The results from the crosstabulation of musicians' psychological distress and *positive mental health* are in accordance with the theoretical expectations (Keyes, 2002) and evidence the *Dual continua model*: musicians can classify for mental illness and at the same time experience high mental health, to various degrees.

As mentioned in Chapter 2, previous research has confirmed the plausibility of this model across a wide variety of groups (Keyes et al., 2008; Lamers et al., 2011; Schulenberg et al., 2004). This brings much-needed clarification on musicians' profile of mental health. Wellbeing and illbeing need to be integrated in a holistic approach.

Previous research with musicians has tended to a binary, and rather simplistic, view of mental health (i.e. one is either healthy or not) (see Chapter 3). As discussed in Chapter 2, corroborated by our results, mental health and mental illness are best placed in different continua.

# 6.4.5 Limitations

Study 2 allowed to fully answer the research questions it set out to investigate. However, it carried some limitations. Similarly to what was discussed for Study 1, the sampling strategy was not probabilistic and participants could decide to take part. Selfselection bias is inherent to the nature of this type of study and impairs any comparisons with large-scale epidemiological surveys with general population probability samples, along with comprising the generalization of results. This is particularly relevant when the main variable of study is NPD. It can be argued that highly distressed individuals are more likely to either refuse to take part or be attracted to the topic. Secondly, the cross-sectional approach only allows exploration of relationships between NPD correlates and does not enable to infer causality, only possible through a longitudinal study. In addition, the self-report assessment mode also carries constraints. Although the K6 scale has a record of excellent reliability and validity, a self-rating approach to mental illness assessment relies heavily on perceptions that can be biased by psychological distress itself. Although it can be argued that is it more realistic to collect the person's perspective rather than impose an external interpretation, it is equally valid to assume that each participant can attribute different meanings to the questions being asked as well as to the rating scale values. Previous research has highlighted how the lack of an interviewer is likely to translate into a more realistic reporting of emotions, especially for men (e.g. Fushimi et al., 2011). This methodological factor has explained higher prevalence rates of psychological distress with other samples and also limits the comparison with population-level studies, which typically involve household panel interviews.

The use of cut-off points to categorize SMI, although informative, also brought further limitations. Despite a wide number of studies relying on the cut-off established by 205

the scale authors, different cut-points have been reported across the research-base. It has been suggested that there is no universal clinical standard for scoring the K6 and cut-offs are dependent on population-specific validation (Kessler et al., 2010; Khan et al., 2014; Pahwa & Karunanayake, 2009). This has obvious implications for the results and is limiting at two levels. First, it reduces the possibility for comparisons. The information about normative values from workforce contexts was already scarce but if there is variability in what counts as disease for each study, secure comparisons become almost impossible. And most importantly, given that it was the first time a profile of NPD using the Kessler scale was conducted with musicians, there was no population-specific cut-off score to be adopted. This process would have implied the application of additional clinical measures and stands as a highly valuable new avenue for research.

Another area of limitation for the present study has to do with the variables chosen. One of the variables left out of the survey is socio-economic status (SES), which has been associated with psychological distress in previous research (Caron & Liu, 2010; Oakley Browne et al., 2010; Pratt et al., 2007). Traditional measures of SES are not equivalent across social groups, and may not validly measure all relevant aspects of what they intend to measure (Adler et al., 1994; Braveman et al., 2005; Caron & Liu, 2010; Cohen et al., 2010; Williams et al., 2010). In order to collect enough data for a valid SES assessment across all the countries represented, we would need an extensive list of questions that would compromise the practicality of the survey and incur in survey burden. This remains, however, an important variable to be taken into account in further studies.

# 6.4.6 Suggestions for further research

Two broad areas for further research emerge from Study 2: design optimisation and investigation of additional variables.

To optimise the methodological design, a probabilistic sample would ideally be obtained, as a representation of the music sector. This is, however, highly impractical and might be best achieved on a national level, as it is virtually impossible to trace all the
existing musicians worldwide, especially those working on a freelance basis. Additionally, a longitudinal design would allow for the clarification of patterns of causality for NPD. As Drapeau et al. (2012) highlight, longitudinal assessment is particularly useful to clarify the time sequence between psychological distress and population-specific risk and protective factors, as well as their combined development over time.

Alongside the investigation of severe cases, the moderate distress group also requires attention. Besides its high prevalence among musicians, in particular younger ones, moderate mental illness is of considerable public health importance because of its risk of transition to SMI (Kessler et al., 2003a). Our results showed that musicians with MMI are near the borderline level for no distress, which stands as a very encouraging trend. However, this group is likely to fall outside the radar of psychological support and perhaps even of mental illness research. Also, when looking at the student sub-sample, the MMI pattern is less encouraging. If the intentions to join both remedial and preventive measures in the sector are to be taken seriously, it will be valuable to continue research efforts on these subclinical bands of distress and on their specific trends over time.

One of the main areas for further development in the attempt to advance our knowledge of mental illness in the music sector is the inclusion of culture-sensitive methods of assessment. It is largely accepted that the individual and collective experiences of mental illness are bound by cultural norms and the issue of what counts as "normality" in different populations has raised more questions than answers. Negative emotions are indeed universal, but their expression can fluctuate in both form and intensity across and within specific cultural contexts (Drapeau et al., 2012; Kirmayer, 1989; Kleinman, 1988; Westermeyer & Janca, 1997). This cross-cultural variation is important both in what relates to the different countries of origin and/ or work of the sample but also, and crucially, in what respects the culture of expression and perception of illness created within the music sector itself. The conceptual framework that musicians use to assess what counts as distress may indeed be influenced by their culture of upbringing, their present cultural framework and their occupational culture. Furthermore, the disease-entity conception of illness as something static and fully internal to the individual is limiting.

Specific mechanisms of expression and perception that shape the experience of illness and that can be idiosyncratic of particular groups need to be addressed. Further qualitative research will help clarify these features.

In line with this, a further methodological improvement concerns the definition of what counts as clinically significant distress or "severe" in a quantitative assessment. In principle, the cut-off point for a scale is set when it is developed, as was the case for the K6. However, different cut-points have been applied across studies and may indeed be justified when it is shown that the initial proposal has limited validity for the population being studied (Dapreau et al., 2012). The need for music-industry specific studies of mental illness to inform tailored interventions stands side-by-side with the need to assess illbeing with this contextual sensitivity. While the prevalence of distress varies across occupations, its assessment often entails the imposition of another population's cut-off points for illness (as was inevitably the case in the current research). While these indicators provide informative broad trends, they are not able to establish a fine-grained understanding of population-specific dynamics.

Our results provided a profile of non-specific distress than enables an estimate of serious mental illness. The NPD construct relates primarily with affective disorders, such as depression and anxiety. There are, however, relevant illness dimensions outside of affective disorders (for example, personality disorders, psychosis, etc.). To further develop this profile, a large-scale assessment of all clinical diagnoses will also be very welcome.

In addition to methodological improvements, additional variables are also of interest for further research.

The risk for playing-related injury is well documented with musicians. Physical demands are also recognized as a risk factor for NPD (de Jonge et al., 1999; Marchand et al., 2005). The relationship between the two, however, remains largely unaddressed with musicians, with only a few exceptions (see section 3.1.4 for a review). It is of interest to explore both sides of the possible impact: how does injury reflect in NPD levels and how does NPD increase the likelihood of injury for musicians? For example, a study with

nurses using the K6 scale found high psychological distress was associated with a 5% increase in the probability of injury at work (Sakano, 2012).

Similarly, psychological demands can increase the odds of NPD (Albertsen et al., 2001; Bourbonnais et al., 2005; Marchand et al., 2005; Paterniti et al., 2002). These can include workload, time constraints and seasons of irregular work patterns alternating between overload and underload that have been linked with musicians in previous research (section 3.1).

The link between NPD and performance anxiety also needs to be addressed. It seems from the results of this study, that levels of NPD are similar across specialisms and areas of activity, performance-related or not. It will be helpful to clarify the level of independence between MPA and NPD. Given the largely affective nature of MPA, an obvious prediction is that the two are associated. However, MPA is very specific to particular types of situations and is not always linked with broader affective disorders. Clarifying this relationship will be useful in further research.

When focusing on professionals, an obvious follow-up study from the current profile would go a step further beyond a description of trends and enable the understanding of the specific impact of NPD on musicians' functionality levels across activities. The present study enabled to draw, for the first time, an estimate of SMI for professional musicians. However, the meaning of SMI in their lives can be highly diverse. For the same levels of distress, there can occur different manifestations of impairment in daily tasks that may translate in various levels of incapacitation. So the question under investigation is enlarged beyond just how distressed is a musician to how impaired by distress they become, across different types of tasks. This assessment would help inform institutions on productivity loss and enhance awareness on the centrality of mental health promotion in the workplace.

In the specific case of students, several additional variables are of interest. First, we did not assess the level of study. Previous research has evidenced different trends in psychological distress for undergraduate and post-graduate students, with higher NPD at the start of the HE academic trajectory (Stallman, 2010). This can be largely attributable

to age differences and the disparity in coping skills that age naturally entails. It can also be argued that the selection process for post-graduate study is in itself already establishing group differences from the start, as one might require more resilience to endure further training. Marriage has also been linked with lower distress risk for university students (Eisenberg et al., 2007; Stallman, 2010; Leahy et al., 2010), and this has been attributed to social and emotional support of a partner. Another variable of interest is the student's status as home or international student. Given the demands on adaptation that moving countries implies, it will be of interest to assess its impact on NPD. Previous studies (e.g. Stallman, 2010; Leahy et al., 2010) found no different in distress levels of international students when compared with domestic students. However, given the high mobility of music students often at a very young age, it will be informative to investigate further.

The longitudinal design already suggested would also be of high relevance for the conservatoire context. Previous research (e.g. Macaskill, 2013) has evidenced important fluctuations in distress at different times throughout a programme of study. For an informed planning of illbeing prevention initiatives and optimization of support services, this assessment in conservatoires would be essential. A longitudinal approach has also allowed to clarify the dynamics of key variables linked with psychological distress among students, such as perfectionism and procrastination across different time points in the academic year (Rice et al., 2012). Perfectionism, in particular, is of high relevance for music students, as reviewed in Chapter 3, and would also be of relevance for further research with this population.

Still in respect of mental health support services in conservatoires, it would be of interest to further research how different levels of distress are being catered for with music students, given the concerning prevalence estimates. In the UK for example, conservatoires are not ready to support cases of moderate or severe mental distress. Mental health support currently stays at the level of counselling for all UK conservatoires. When encountering a complex case, the support team will likely refer the student to the National Health Service (NHS). The UK Royal College of Psychiatrists (2011) has reported

that access to mental health services in the NHS has narrowed to focus on those with the severest problems. Very often students get lost in the system and only receive treatment after a long wait. This has led to a pilot initiative of partnership between the NHS and five major UK universities, of which one the of UK conservatoires is a part of, currently running in Manchester until 2022. It consists of a University Student Mental Health Hub that allows students with complex cases to receive direct psychological and psychiatric support within 48 hours of referral. Students with moderate mental health problems who typically would not fit the criteria for traditional routes for NHS immediate support are also helped through the service (NHS, 2021). The evaluation work is currently underway and further research within the music student population will bring much needed insight into the potential of this new format for conservatoires more broadly.

Finally, there is a survival bias permeating this study. We assessed NPD in a group of people who are indeed engaged in the music sector. The musicians studied made it in the industry either on an academic level, professionally, or both. There is, however, a group of musicians who dropped out of the sector. If that change was to any extent a consequence of psychological distress, this is a group of high interest for mental illness research that deserves special attention in further studies.

In summary, the profile of psychological distress among musicians (RQ2) is encouraging, with a small minority classifying for SMI. For professionals, this is even more so, with clear advantages when comparing with other occupations. Music students deserve further attention, as this group presents higher rates of NPD than professionals and comparable rates with students of high-distress programmes such as medicine. Musicians' psychological distress profile is also in line with other performing arts. Finally, the *Dual continua model* (Keyes, 2002) has been validated with musicians (RQ3) showing that musicians can be simultaneously mentally ill and experiencing high mental health.

# 7. STUDY 3: GLOBAL AND WORK-DOMAIN MEANING

# 7.1 Introduction

The purpose of Study 3 is to investigate musicians' profiles of global and domainspecific meaning, focusing on the work domain. The starting point was the intent to address a gap left by a recent investigation of musicians' wellbeing using the PERMA framework (Ascenso et al., 2018), shedding light onto how meaning may be a particularly key building block for musicians' wellbeing. As reviewed in Chapter 3, besides an overall encouraging profile across the five elements of PERMA, a striking finding was an extremely high score for meaning, both in relation to the other elements of the model and when comparing with general population indicators. Despite previous reports of meaningful work among musicians both qualitatively with professionals (Ascenso et al., 2016) as well as through the exploration on the development of a sense of calling among music students (Dobrow, 2013), it was the first time quantitative indicators of meaning were assessed with a large international sample of musicians and, crucially, placed in the context of other dimensions of wellbeing. Another interesting finding was that positive emotions represented the PERMA component with the lowest scores. This emphasised the need to do justice to the wellbeing construct with its hedonic and eudaimonic features when investigating musicians' wellbeing, as discussed in Chapter 2. Profiles based on affect alone will not fully grasp musicians' experience of wellbeing (Ascenso et al., 2018).

Despite its contribution, the conclusions that the study enabled remain limited and open the way for two necessary clarifications. First, the PERMA-profiler is fairly brief and does not capture the important distinction between *presence* of meaning (perceiving meaning at present) and *search* for meaning (actively pursuing it) (Steger et al., 2006). Furthermore, it remained unclear if the musicians from Ascenso et al. (2018)'s PERMA study had reported perceptions of meaningfulness as a result of evaluating life overall, or of thinking about their particular professional circumstances in music. The scale points to an evaluation of meaning in life. However, the study was presented as an investigation of musicians' wellbeing, denoting an occupational focus. The global vs domain-level meaning distinction is key and needs to be investigated before any implications can be drawn.

The present study aims to address these limitations, ensuring the role of meaning is further understood and in so doing, contribute to the overall profile of musicians' wellbeing this project aims to generate. There is interest in assessing if musicians are primarily experiencing meaning (presence), seeking it (search for meaning) and the interplay of both. It is also of importance to evaluate global-level meaning (meaning in life) and domain-level meaning (meaningful work), as well as the relationship between the two. Importantly, it is of interest to investigate if finding meaning through working in music contributes to overall meaning in life.

This section presents the construct of meaning. First, we clarify the meaning of meaning itself. Secondly, we take a closer look at the operationalization of both meaning in life and meaningful work, along with their respective correlates from recent research. This is followed by considerations on previous attempts to address meaning with musicians. The section ends with the aims for the current study.

### 7.1.1 The meaning of meaning

Research has progressed into the integration of meaning as a normative marker of human functioning, a key dimension of flourishing and a cornerstone for relevant therapeutic tools such as logotherapy (Costello, 2019; Frankl, 1945; Frankl, 2004). Meaning scholars have also started to shed light onto the multidimensionality of the construct (George & Park, 2016; Leontiev, 2005; Martela & Steger, 2016; Reker & Wong, 1988; Wong, 2012). The rapid expansion of Positive Psychology has played a part in this and the field has become increasingly fertile in both theoretical and empirical contributions to the understanding of meaning. Despite a growing interest in the topic, however, there is still conceptual ambiguity around the meaning of meaning itself. Besides a diversity in definitions, it is not uncommon to find rather simplistic approaches, usually in a theoretical vacuum, with assessments simply referring to "meaning", disregarding the complexity of the construct. Before addressing meaning in life and meaningful work and presenting the adopted operational definitions for the current study, we will consider important nuances in terminology that have been highlighted across the research base.

An initial clarification is on the difference between meaning *in* life and meaning *of* life. Meaning *of* life points to looking at why life exists, what its purpose is in the broader sense, considering the universe and man's place in it. As Martela and Steger (2016) point out, these are essential metaphysical questions that are out of reach for empirical evaluation and outside of psychology's jurisdiction. Psychology addresses what makes individuals experience meaning *in* their lives, that is, how they have a sense that their life is worth living, significant and valuable (George & Park, 2016; Martela & Steger, 2016; Morgan & Farsides, 2009; Weinstein et al., 2012).

Meaning also incorporates both content and process, a distinction present in different degrees across the meaning literature, particularly that feeding from Frankl's work (Frankl, 1945; Frankl, 2004). Steger et al. (2006) highlight this differentiation, framing it as two dimensions of meaning: *presence* (the present experience of a meaningful life) and *search* (the degree to which people seek meaning in life). The dynamics between presence and search for meaning are complex. Overall, the amount to which individuals experience meaning is fairly independent of how committed they are in searching for it (Steger et al., 2006, 2008). For a full understanding of the experience of meaning, however, assessing these two dimensions together is essential (Steger & Kashdan, 2007).

Furthermore, we can experience meaning on different levels: a global level (life as a whole) and domain-specific levels (career, relationships, etc.). Individuals may experience different combinations of presence and search, for each level and/or domain. For example, low presence of meaning in life in general may lead to a high search for meaning through one's career. There is evidence that meaning in work may help satisfy a more global search for meaning in life (Steger & Dik, 2009).

Another key distinction is between "meaning" and "meaningfulness", often used interchangeably. There seems to be consensus on considering "meaning" to commonly

refer to coherence (i.e. having made sense of something) and "meaningfulness" to the significance attributed to something (Rosso et al., 2010)<sup>47</sup>. These represent in fact two different facets of meaning (Leontiev, 2005; George & Park, 2016; Martela & Steger, 2016; Park, 2010). Within empirical pursuits, if unaddressed, under the same "meaning" label we may be indeed evaluating different facets of the construct. Before presenting the definition of meaning guiding this study, we summarize the most recent systematization of the *facets* of meaning.

### 7.1.1.2 Facets of meaning

The process of meaning-making has been suggested as integrative, including cognitive, motivational and evaluative components. Recent work by Martela and Steger (2016) has systematized the facets most commonly addressed. The authors suggest *coherence, purpose* and *significance* as the three dimensions building the construct of meaning.

*Coherence* is about life making sense. It has to do with an individual's description of one's life and their understanding of it as being comprehensible. Life is coherent if we are able to draw recognizable patterns from it and form some sense of structure and predictability (Antonovsky, 1993; Heine et al., 2006; Park, 2010). Coherence is often referred to as the cognitive dimension of meaning (Martela & Steger, 2016; Reker & Wong, 1988).

Perhaps one of the greatest conceptual confusions in this area comes from the interchangeable use of the terms meaning and *purpose*. While purpose has indeed been suggest as a synonym of meaning (e.g. Reker & Peacock, 1981), there has been support for purpose to rather stand as a distinct construct (George & Park, 2016; Weinstein et al., 2012). Meaning is likely to arise when people have a clear purpose in life (Frankl, 1945),

<sup>&</sup>lt;sup>47</sup> Martela and Steger (2016) borrow a helpful comparison from philosophy to understand this difference. While epistemology concerns the study of knowledge, ethics is the study of values, implying considerations on good and bad. Similarly, meaning conceptualized as coherence is about what we know (in other words, an epistemic notion), while meaning conceptualized as meaningfulness, denotes significance and purpose, implying an ethical evaluation.

but the construct of meaning is not reduced to purpose alone as purpose implies motivation.

Finally, while coherence entails comprehensibility and purpose refers to finding direction for one's actions, the third facet of meaning is about the sense of life's intrinsic value: meaning as *significance* (Heintzelman & King, 2014; Morgan & Farsides, 2009; Steger, 2012).

In sum, meaning can be understood as consisting of: 1) coherence: a comprehensible representation about one's life and the world; 2) purpose: valued goals and direction and 3) significance: a sense that one's life is worth living (Martela & Steger, 2016).

### 7.1.2 Meaning in life: Operational definition

In order to avoid the risks of conceptual ambiguity that have been flagged across studies (Heintzelman & King, 2014; Martela & Steger, 2016), this section lays out the operational definition of meaning guiding the present study.

We adopt the definition of meaning in life suggested by Martela and Steger (2016), also in line with similar previous proposals (Steger, 2012). Meaning in the context of our investigation is understood as the emerging output from "the web of connections, interpretations, aspirations, and evaluations that (1) make our experiences comprehensible, (2) direct our efforts toward desired futures, and (3) provide a sense that our lives matter and are worthwhile" (Martela & Steger, 2016, p. 165). Meaning emerges from a reflection about one's life as a whole, understanding it, imprinting direction to it, and finding worth in it. This implies accepting the three facets as part the construct: coherence, purpose and significance, with the first inherently descriptive and the last two evaluative (Martela & Steger, 2016).

Furthermore, this study is guided by the distinctions made between presence and search (Steger et al., 2006) and in line with recent proposals (Martela & Steger, 2016), we assume that the three-facet model can be represented across these two dimensions.

In other words, coherence, purpose, and significance can be experienced (*presence*) and simultaneously searched for (*search*).

### 7.1.3 Meaning in life: Correlates

Having clarified the conceptual formulations of meaning, this section presents a summary of findings from meaning in life studies, including trends of key demographic variables, associations with wellbeing indicators, and work-related outcomes.

Age has been the only reasonably consistent predictor of meaning in life (MIL). Despite mixed results across studies, MIL tends to be higher among older groups, while search for meaning generally decreases with age (Morgan & Robinson, 2013; Ang & Jiaqing, 2012; Steger et al., 2009; Fegg et al., 2007; Steger et al., 2006; Reker, 2005; Van Ranst & Marcoen, 1997; Allan et al., 2015). Trends on the relation between sex and MIL have not been clear, and the same is true for race (Steger, 2019; Steger et al., 2019).

Meaning has been associated with varied health indicators, both objective and subjective, as well as with health-promoting behaviours. Crucially, this pattern is found across samples of varied health status, including chronic illness patients. When looking at objective indicators, purpose appears across epidemiological studies as a general predictor of lower incidence of disease (Kim et al., 2013; Sirri et al., 2010), healthy aging and decreased all-cause mortality within elderly samples (Krause, 2009; Skrabski et al., 2005), younger adults (Hill & Turiano, 2014) and across cultures (Koizumi et al., 2008). As mentioned in Chapter 2, the association between higher levels of eudaimonic wellbeing and more favourable immunological and endocrine profiles has also been consistently evidenced (Friedman et al., 2007; Ryff et al., 2004).

When looking at subjective indicators, meaning has been consistently linked with better self-perceived health (Krause, 2004; Krause & Shaw, 2003; Low & Molzahn, 2007; Skrabski et al., 2005; Steger et al., 2009) and illness coping (Koenig et al., 1988; Thuné-Boyle et al., 2006). Meaning has also been associated with health-promoting behaviours, which helps explain its impact on health (Park, 2007). These include higher levels of physical activity, relaxation, better diet control, prevention of accidents, less smoking, health-monitoring and overall greater responsibility for one's health (Holahan et al., 2008, 2011; Holahan & Suzuki, 2006; Homan & Boyatzis, 2010; Lampinen et al., 2006; French et al. 2001; Piko & Brassai 2009; Krause 2003; Okasaka et al. 2008).

Focusing on mental health, benefits of meaning include: increased positive affect in adversity (Affleck & Tennen, 1996; Folkman & Moskowitz, 2000), curiosity (Kashdan & Steger, 2007), authenticity and self-actualisation, greater accessibility to one's true self and a more deliberate approach to processing one's identity (Beaumont, 2009). Conversely, the presence of meaning has been shown to hold a negative relation with psychological distress and pathology (Dunn & O'Brien, 2009; Steger et al., 2008; Steger & Kashdan, 2007; Steger, Mann, et al., 2009). The *search* for meaning dimension has been positively associated with psychological distress (Li et al., 2019).

The positive link between meaning and life satisfaction is also well established (e.g. Park, 2010; Steger et al., 2006; Steger, Oishi, et al., 2009). An interesting pattern, denoting the fascinating interplay between presence and search for meaning, has been observed in this context. In American samples, searching for meaning was found to be negatively correlated to life satisfaction for people who scored low in presence of meaning. In other words, for people who experience low meaning, the greater one's life satisfaction, the smaller the tendency to search for meaning. For those high in presence of meaning, the two dimensions were unrelated (Steger et al., 2006; Park et al., 2010). As Martela and Steger (2016) highlight, affective components such as being happy or satisfied might be used when appraising how meaningful one's life is, while standing as independent from the construct of meaning.

Endorsing *presence* of meaning more highly than *search* for meaning is generally linked with higher wellbeing and the inverse also holds: poor mental health is related to the combination of lower *presence* and higher *search* (Cohen & Cairns, 2012; Park, 2010). Finally, people reporting high *presence* and *search*, also experience high levels of wellbeing (Steger, Oishi, et al., 2009).

#### 7.1.4 Meaningful work

The central role of work in building a life with meaning has been evidenced consistently (England & Harpaz, 1990; Harpaz & Fu, 2002; Quintanilla & Wilpert, 1991; Schnell, 2011). However, as is the case with the construct of MIL, literature on meaningful work (MW) has also suffered from ambiguity and there are preliminary clarifications worth attending to before laying out the operational definition that guides the current study.

### 7.1.4.1 Conceptual considerations

The first aspect worth noting is that *meaning in work* is conceptually and empirically different from *job satisfaction*. While job satisfaction refers to a state occurring as a result of an appraisal of job experiences (Fritzsche & Parrish, 2005), work meaning points to how coherent, purposeful and significant that work appears to the individual. Assessment of job satisfaction typically emphasises mainly hedonic wellbeing, even if including cognitive aspects and tapping into personal fulfilment. Meaningful work on the other hand, is essentially eudaimonic (Steger, Dik & Shim, 2019).

A second common confusion comes from the interchangeable use of the expressions "meaning of work" and "meaning *in* work" (e.g. Wrzesniewski & Dutton, 2001). Meaning of work appears across the research base when work per se is the focus of analysis, for example: work as a social institution, global meaning of unemployment, etc. (Bailey et al., 2017; MOW International Research Team, 1987; Quintanilla & Wilpert, 1991). This can be addressed on an individual, organizational, or societal level. Harpaz and Fu (2002) state it clearly as "the significance, beliefs, definitions and the value which individuals and groups attach to working as a major element of human activity" (p. 641). Meaning *in* work, on the other hand, is about one's subjective experience of meaningfulness in work (Clausen & Borg, 2011; Schnell et al., 2013). The individual's

experience is the focus. This can equally lead to evaluations on a larger scale (organization or society)<sup>48</sup>.

Finally, there is also an important nuance in the use of "meaningful" to refer to work. The use of "meaning" is broadly centered around *making sense* of something – in this case, work (Pratt & Ashford, 2003). This implies that work can make sense or not. It can mean something positive, negative or neutral (Brief & Nord, 1990; Budd, 2011; Wrzesniewski, 2003). The expression "meaningful work", however, carries an implicit positive bias. Despite the variety of definitions, there is consensus on MW standing as something positive and desirable. MW is then work that holds value for the individual. Furthermore, the fact that work has a certain *meaning* does not translate in it being *meaningful* for the individual. The same work may be highly meaningful to one person and not meaningful to another. These perceptions happen through the lens of the self and one's subjective experiences (Bailey, et al., 2016; Rosso et al., 2010).

The appeal for careful deliberation when using this terminology has been emphazised in one of the most thorough reviews on work meaning (Rosso et al., 2010) as a necessary next step towards rigour and more robust research. The lack of consensus on what constitutes MW is also evident. A recent review found fourteen different definitions of MW alone (Both-Nwabuwe et al., 2017). This naturally translates in empirical limitations. Some definitions are tautological and even in research using rigorous assessment tools, there is at times a lack of correspondence between instruments and the definitions used. Overall, there seems to be agreement on the need of moving from a monolithic concept of meaningful work to describe it as a result of complex dynamics between different dimensions. However, there is still no agreement on these (Rosso et al., 2010; Bendassolli & Borges-Andrade, 2015; Chalofsky, 2003; Lips-Wiersma & Morris, 2009; Steger et al., 2012).

<sup>&</sup>lt;sup>48</sup> Steger (2016) clarifies this further, suggesting another way to look at this key distinction. Meaningful work research (used as a synonym to meaning *in* work) aims to investigate the value work provides, whereas meaning of work investigation is about the broader role of work in life and society.

Addressing this, Steger et al. (2016) highlight that despite the disparate conceptual grounds, there are common threads across definitions. The first is the underlying notion that for work to be meaningful, individuals need to be able to perceive their efforts at work brought some personally meaningful contribution. Secondly, it is broadly sustained that MW feeds into the perception of one's career being purposeful and significant and supporting their global MIL experience. Finally, there seems to be a theme weaving the different conceptualizations of MW around it implying the individual experiencing their work as something they perceive as contributing to the greater good (Steger et al., 2016; Steger et al., 2012).

Steger et al. (2012), in line with previous proposals (Rosso et al., 2010), systematized these threads to conceptualize MW as multidimensional, with three primary facets: (1) positive meaning in work, (2) meaning-making through work, and (3) greater good motivations. The first facet - *positive meaning in work* - draws mainly from work psychology (e.g. job characteristics model, Hackman & Oldham, 1976<sup>49</sup>) and is about an individual's sense that their work matters. *Meaning-making through work* refers to the extent to which work aids people in making sense of the world and fostering personal growth, capturing the broader life context of people's work. Finally, *greater good motivations* refers to the belief that one's work has a positive impact on others (Steger et al., 2012; Allan et al., 2016).

### 7.1.4.2 Operational definition

This study investigates meaning *in* work, rather than meaning *of* work. We will adopt the definition of meaningful work proposed by Steger et al. (2012) (building from previous proposals, e.g. Rosso et al., (2010) and Hackman & Oldham, 1976). For the purposes of this study, meaningful work is "both significant and positive in valence (carries *meaningfulness*)" (Steger et al., 2012, p. 323), with a eudaimonic

<sup>&</sup>lt;sup>49</sup> The job characteristics model (Hackman and Oldham, 1974) proposes five core job dimensions that affect crucial outcomes such as job satisfaction: autonomy, feedback, skill variety, task significance and task identity.

rather than hedonic focus, that is, growth-oriented rather than pleasure-oriented. The experience of MW is accepted as the integration of the three facets: 1) positive meaning in work; 2) work as a means of meaning-making, and 3) the motivation to positively contribute to the greater good (Steger et al., 2012).

Finally, for a study in MW it is important to not only define what is meant by "meaningful" but also what is meant by "work". Interestingly, work about the UK's Musicians Union highlights how hard it is to define what counts as work in music and, somewhat surprisingly, how unusual it is to view musicians as workers (Williamson & Cloonan, 2016). Musicians have also reported how distinguishing between work and leisure is somewhat difficult (Juniu et al., 1996). This study will focus on paid work only. This has been advocated for in previous research (e.g. Both-Nwabuwe et al., 2017). Although it can be argued that work is a wide concept, integrating a broad spectrum of activities such as caring for others, volunteering, etc. (Veltman, 2016), we are interested in the occupational domain, and in work that is performed in the context of one's main professional commitment.

#### 7.1.4.3 Meaningful work: Correlates

Having set the conceptual framework for MW, this section presents a short summary of findings from MW studies, including general trends, links with demographics, work-related outcomes, health and wellbeing indicators and common predictors.

### 7.1.4.3.1 General trends

The first important trend worth highlighting is that meaningful work is highly prevalent (Allan et al., 2014). It is also desirable and people tend to thrive for it. A survey of nearly 100.000 people from 34 countries, as part of the Kelly Global Work Force Index, found that over half (51%) would be willing to receive a lower salary or work in a less prestigious role, for work that would contribute to something more meaningful (Kelly

Services, 2009). Hu and Hirsh (2017) reinforced how people are willing to consider lowering the salary they think is the minimum acceptable when comparing jobs that they perceive as meaningful with those perceived as meaningless (on average, 32% lower). Also, an enhancement of a job's apparent meaningfulness in the way the jobs were introduced in the survey, led to lowering the minimum acceptable salary that individuals demanded for the position. The authors report that workers who found more meaning in their work were more likely to decline higher-salary offers elsewhere, even when controlling for demographics and for differences in job characteristics. These results resonate with previous research pointing to meaningfulness as the more important aspect perceived by employees when comparing to pay, rewards, promotion or working conditions (Cascio, 2003).

Interestingly, Hu and Hirsh (2017) also found that almost half of the jobs described as "meaningful" by at least one person were also described as "meaningless" by others, highlighting again how meaningfulness is a largely subjective appraisal. The inclination to accept lower pay in return for MW was also shared by a wide range of jobs, irrespective of income levels. Crucially, socioeconomic status had no link with the financial value attributed to meaningful work. Another study looking across different roles (Holbeche, 2004) reinforced this, showing that in all groups studied, the majority of participants were looking for a greater sense of meaning (63% of board directors, 69% of directors and senior managers and 72% of middle managers).

#### 7.1.4.3.2 Demographics

When looking at demographic variables, the study establishing empirical evidence for the three facets of meaning outlined above (Steger et al., 2012), assessed potential trends in a sample of university staff across a wide range of occupations, including faculty, administrative assistants, accounting professionals, researchers, administrative professionals, student services professionals, IT specialists, facilities management professionals, librarians, and foresters. No differences for MW were found across sex, or race/ethnicity for any of the three facets<sup>50</sup>. Other accounts have also pointed to no major age-related differences when assessing MW (Lips-Wiersma & Morris, 2009; Lips-Wiersma & Wright, 2012).

Allan et al., (2015) found an interesting interplay between MIL and MW, in relation to age. In a sample of adults aged 18 - 67, presence of MIL did not vary as a function of age when looking at the entire sample. However, participants in their active work years (aged approximately 20–50) who found meaning in work were more likely to report higher MIL. Older participants with high MW did not report the same increased levels of meaning in life as younger individuals. The authors suggest that in different seasons of life, different domains may impact life meaning evaluations more than others. MW was also found to serve as a significant moderator in the association between age and the search for meaning. Specifically, irrespective of age, adults report less search for meaning when they have higher MW.

A recent mixed-methods study looked at perceptions of MW across generational cohorts (Weeks & Schaffert, 2019). Interestingly, all generations defined MW fairly similarly. However, there was a negativity stereotype towards the remaining generations, in other words, every generation perceived that the other generations worked primarily for money, did not work as hard, and did not care about meaning.

Finally, Lips-Wiersma and Wright (2012) found a slight mean difference with women scoring higher in MW than men<sup>51</sup>, but approaching non-significance. When exploring factors deemed most important to long-term career choices in college students, Duffy and Sedlack (2007) found that contributing to society was valued by women more than by men.

<sup>&</sup>lt;sup>50</sup> Only a very small significant positive correlation was found between age and positive meaning in work (r = .11, p < .05), when controlling for key variables such as withdrawal intention, organizational commitment and a sense of calling (Steger et al., 2012).

<sup>&</sup>lt;sup>51</sup> using the Comprehensive Meaningful Work Scale

#### 7.1.4.3.3 Work-related outcomes

Meaningful work has also been studied in relation to desirable organizational work outcomes. Overall there is strong support for MW as a means to provide richer, more enjoyable and productive employment (Steger & Dik, 2009). Steger et al. (2012) found a positive relation between MW and job satisfaction, intrinsic motivation towards work, organizational citizenship behaviors, career commitment and organizational commitment as well as a negative association with extrinsic work motivations, days reported absent and withdrawal intentions. This adds to a large body of research also pointing to MW as highly motivational, leading to improved engagement, performance, empowerment, job satisfaction, organizational identification, with negative associations with turnover, job disengagement, stress and cynicism (see Allan et al. 2018 for a meta-analysis; Berg et al., 2010; Holbeche, 2004; May et al., 2004; Pratt & Ashford, 2003; Roberson, 1990; Scroggins, 2008; Wrzesniewski & Dutton, 2001). A crucial result is that MW appears to be a superior predictor of absenteeism when compared to job satisfaction, the commonly-used indicator (Steger et al., 2012)<sup>52</sup>, suggesting the need to re-think why people miss work.

People experiencing MW also hold more certainty (Duffy & Sedlacek, 2007) and clarity about their choice of career (Steger et al., 2010), as well as higher career self-efficacy (Domene, 2012; Dobrow & Tosti-Kharas, 2011). Meaningfulness at work has also emerged as a mediator between job characteristics<sup>53</sup> and work engagement (May et al., 2004). Similar results have been found when studying work orientations. Seeing one's work as a calling leads to experiencing greater job satisfaction and spending a higher number of unpaid hours working (Wrzesniewski et al., 1997). The positive relationship between MW measured as having a calling and desirable organizational variables has also been longitudinally confirmed (Duffy et al., 2014).

<sup>&</sup>lt;sup>52</sup> Absenteeism was found to not be linked with job satisfaction, commitment or intentions to leave the organization. Rather, people chose to miss work that holds no meaning.

<sup>&</sup>lt;sup>53</sup> task significance, task identity, autonomy, feedback and skill variety

Finally, MW also makes people attribute greater centrality to work in their lives (Harpaz & Fu, 2002).

### 7.1.4.3.4 Wellbeing indicators

Wellbeing research has for long considered the role of specific life-domains in the judgments people make when assessing their lives as a whole (Steger & Dik, 2010). In this respect, the work domain has received particular attention and MW stands as a key ingredient for flourishing (Diener et al., 1999; Headey et al., 1991; Rosso et al., 2010; Veltman, 2016). In general, those who engage in work they consider meaningful report higher levels of wellbeing (Arnold et al., 2007) and wellbeing components such as positive emotions (Arnold et al., 2007; Steger et al., 2010, 2013), life satisfaction (Douglass et al., 2016; Steger et al., 2012; Steger & Dik, 2010) and meaning in life (Arnold et al., 2007; Dik et al., 2008; Dik & Steger, 2008; Steger et al., 2012; Steger & Dik, 2010; Douglass et al., 2016). Finding meaning in work also predicts a greater sense of community, spiritual growth and moral flourishing (Gupta et al., 2004) and greater quality of home life (Tummers & Knies, 2013).

The impact of MW on life-satisfaction (LS) is of particular interest to this thesis. The association between MW and LS is not as strong as the association between meaning in life and LS (Steger et al., 2012). Nevertheless, besides a positive association, there is evidence that MW explains variance in LS beyond the variance explained by meaning in life and job satisfaction. As Steger et al. (2012) emphasized, this suggests the conceptual independence of meaningful work, in other words, it is not an amalgamation of meaning in life and job satisfaction but rather a different construct. Furthermore, search for career meaning was found to be negatively related with life satisfaction, as is expected, but this was less pronounced than the negative association between search for meaning in life and satisfaction with life (Steger et al., 2012).

Steger and Dik (2009) investigated the link between meaning in life and career meaning. MIL was found to predict wellbeing and career decision efficacy more

consistently than career meaning. However, the authors highlight how individuals searching for meaning in life are better off if they experience meaning in their work. Holding meaning at the domain level is associated to greater wellbeing and career decision efficacy. Seeking meaning is frequently linked with reduced wellbeing. Also, experiencing meaning in life does not seem to satisfy individuals' search for career meaning.

For higher education students, having a sense of calling is related to both experiencing meaning and seeking it (Steger & Dik, 2009). Once again, the relationship is not strong enough to suggest redundancy of the constructs.

An interesting pattern emerges when looking at MIL, MW and work stress together (Allan et al., 2016). As expected, work stress is negatively associated with the presence of meaning in life and positively related to the search for meaning in life. Meaning-making through work, however, moderates the relationship between work stress and MIL: for higher meaning-making at work, the association between work stress and the presence of MIL is weaker. MW acts, therefore, as a protective factor (Allan et al., 2016).

### 7.1.4.3.5 Ill-health indicators

Meaningful work has also emerged as negatively associated with psychological distress and mental illness. Steger and Dik (2009) found life meaning was negatively associated with depression but career meaning was not. Further work (Steger et al., 2012) clarified that MW predicted lower depression but wasn't a significant predictor for stress or anxiety. Interestingly, when looking at anxiety and stress, higher MW was linked to better results for individuals who simultaneously scored high in job satisfaction. In other words, they needed to view their work as both meaningful and satisfying in order for there to be an effect on anxiety and stress.

The Job Characteristics Model (Hackman & Oldham, 1976) proposed that MW leads to satisfaction with one's job. Therefore, meaningfulness can lead to satisfaction for

some people, and from the results of Steger et al. (2012) might only be linked with lower anxiety and stress for them. However, the direction of this relationship is still not clear (Humphrey et al., 2007). Arguably, both variables can be fairly independent and interact. As Allan et al. (2016) highlight, for example, a nurse can view her work as meaningful because it saves lives. However, at the same time, her work may cause stress and anxiety. Despite not being enough to reduce the stress and anxiety, the meaningfulness of work can protect from the impact of stress on MIL (Allan et al., 2016).

Most MW research has been cross-sectional (Steger, 2016). Therefore, it is hard to know the direction of the relationship: does meaning lead to greater wellbeing or do people who are generally well tend to find more meaning in their life domains? It is not always clear what can be considered true predictors of MW, consequences or simply related variables. However, some evidence on possible antecedents has been put forth, including individual-level, interpersonal, and workplace variables.

### 7.1.4.3.5 Predictors of meaningful work

Some of the earliest findings on predictors of MW are associated with the Job Characteristics Model (Hackman & Oldham, 1976; Johns et al., 1992). Skill variety, task significance and task identity<sup>54</sup> predict MW. We also know that MW flourishes when individuals have a clear sense of their abilities and of what is expected of them, along with the notion of what it means to work successfully within their context (Steger & Dik, 2009; Steger & Dik, 2010). MW has a clear goal, serves a wider purpose and to some extent contributes to the greater good, is aligned with the individual's strengths, and is highly motivating (Steger, 2016; Steger et al. 2012; Hartzer & Ruch, 2012; Littman-Ovadia & Steger, 2010). Good workplace relationships and a calling orientation to work also make MW more likely (Wrzesniewski et al., 1997; Michaelson, et. al., 2014).

<sup>54</sup> Skill variety refers to the degree to which a job allows for different activities implying use of various skills. Task significance is the degree to which the job has an impact on the organisation and on society more broadly. Task identity is the extent to which the work allows work on a complete process - a clear beginning and ending, rather than just small parts (Hackman & Oldham, 1976).

Overall, the link self-concept — job fit along with job enrichment<sup>55</sup> consistently appear as predictors of MW, as well as opportunities for self-expression through work (May, et al., 2004; Scroggins, 2008).

Qualitative research has also revealed the role of mentoring on one's sense of meaningfulness at work (Kennett & Lomas, 2015), although it remains unclear if people drawn to mentor others are by default already experiencing more meaning in their work in the first place. Finally, there is also evidence that leaders who endorse transformational leadership practices<sup>56</sup> will increase their employees' experience of MW (Judge & Piccolo, 2004; Piccolo & Colquitt, 2006; Purvanova et al., 2006; Sparks & Schenk, 2001).

### 7.1.4.4 Studies with musicians

When looking at specific occupational groups, the research base on both global and domain-specific meaning has focused almost exclusively on white and blue-collar employees. Performing artists remain mostly absent from these investigations with calling studies being the only exception. The work of Dobrow (2013; Dobrow & Tosti-Kharas, 2011) has included musicians in its endeavor to understand the dynamics of experiencing a calling over time<sup>57</sup>. With a sample of music students enrolled at two U.S. summer high school music programs, Dobrow (2013) assessed calling at four time points across seven years. Greater behavioral involvement and social comfort in music appeared as the consistent predictors of calling at Time 1 but were inversely related to calling seven years later. The study suggested a difficulty in sustaining a calling and that this stability may rely on the individual's social environment and behavioral cues. This study investigated students' orientation to work. The way professionals approach their work across the performing arts remains largely unaddressed.

<sup>&</sup>lt;sup>55</sup> Job enrichment refers to adding dimensions to existing jobs to make them more motivating (Hackman & Oldham, 1976).

<sup>&</sup>lt;sup>56</sup> Transformational leadership implies a leader working with teams to identify needed change, generate a vision and inspire implementation of that change in collaboration with members of the group (Bass & Riggio, 2006).

<sup>&</sup>lt;sup>57</sup> defined by Wrzesniewski et al. (1997) as a consuming passion towards a domain

Adopting Wrzesniewski et al. (1997)'s model of work orientation<sup>58</sup>, a recent study assessed the distribution across orientation categories for a sample of professional musicians who had performance as their main source of income (Ascenso et al., *in preparation*). Of the 545 respondents, it was possible to assign 472 to an orientation category. 76.7% identified with a calling orientation, 16.1% with a career orientation and 7.2% with a job orientation. The remaining participants identified with more than one category equally. In other words, a striking majority of professional musicians saw their work as intrinsically rewarding, personally fulfilling and core to one's identity. These results contrast with those found for the sample from the seminal study outlining the model. Wrzesniewski et al., (1997)'s group included 196 professionals from across a wide range of occupations.<sup>59</sup> Of the sub-sample for which it was possible to classify (*n* = 135), 35.5% fell within the calling category. The difference in proportions between this group and the musicians' sample was significant (Ascenso et al., *in preparation*).

Two other studies have addressed meaning with musicians, through the lens of the PERMA model (Seligman, 2011; Ascenso et al., 2018; Ascenso et al., 2017). The first is the PERMA profile mentioned at the start of this chapter, pointing to high scores of perceived meaning for musicians and crucially, higher than general population scores (Ascenso et al., 2018). The second study looked at the PERMA elements qualitatively with an in-depth investigation of the experience of a group of high-profile musicians, from across the six main threads of career activity in Western classical music: soloist, orchestra member, chamber ensemble musician, singer, conductor and composer. Participants' accounts emphasized a high sense of meaningfulness through work in music, tapping into elements suggested in previous research as the hallmarks of a calling orientation: a highly rewarding activity, central to identity and "morally inseparable from [one's] life," (Bellah et al., 1996, p. 66). Relational variables emerged at the core of meaning-making through music, even for musicians working primarily alone, with peak musical moments and the shared nature

<sup>&</sup>lt;sup>58</sup> This model suggests people's orientation towards work to be represented by three possible categories: "a job (focus on financial rewards and necessity; not a major positive part of life), a career (focus on advancement), or a calling (focus on enjoyment of fulfilling, socially useful work)" (Wrzesniewski et. al, 1997, p.21).

<sup>&</sup>lt;sup>59</sup> This included health-care professionals, administrators, educators, librarians, supervisors, IT programmers and analysts, administrative staff, and clerical workers.

of music-making as central ingredients in this domain. There were also accounts of challenges towards artistic integrity and constraints to an individual artistic voice (Ascenso et al., 2017) in line with previous research (e.g. Parasuraman & Purohit (2000); see section 3.4.2 *Psychosocial risk factors*).

Finally, sources of meaning in the context of orchestra dynamics have also been investigated. A qualitative study focusing on the role of the conductor as a potential source for meaning-making suggested the need to explore the principles of transformational leadership applied to the orchestra context, as a means to enhance players' MW. This study also shed light into the challenges around artistic integrity faced by musicians working under leadership, such as discontentment about interpretation choices and being subordinate to the will of a conductor without room for input (Rodrigues et al., 2016).

Despite the lack of studies addressing musicians' MW directly, there is a small group of outputs looking at variables that can arguably stem from a possible lack of MW. For example, orchestral musicians have been associated with the experience of boredom and monotony at work (Parasurman & Purohit, 2000; Steptoe, 1989), denoting possible challenges around engagement. Work engagement is distinct from MW and describes the level of involvement rather than the significance of the task. For example, someone can be quite dedicated to an activity of diminished significance for the individual, such as excessive bureaucracy (Sarros et al., 2002). However, engagement and MW are related (Olivier & Rothmann, 2007) and we can argue that it would be reasonable to expect that greater meaningfulness would translate into less boredom at work.

In summary, both meaning in life and meaningful work are multi-dimensional constructs, key to flourishing, with important wellbeing correlates, and which remained largely unaddressed with musicians.

### 7.1.5 Aims for the current study

The present study was designed to answer the fourth overarching question of this thesis, Research Question 4 (RQ4) (see Chapter 4 ): Do musicians report high perceived meaning in both global-life and work domains? To answer this question, the study builds upon the following aims:

- to draw a profile of meaning in life from a large sample of musicians (professionals and students), addressing it as multidimensional clarifying both indicators of *presence* of meaning (RQ 4.1) and *search* for meaning (RQ 4.2) and describing trends for sex, age, and type of musical activity (RQ 4.3);
- 2) to draw a profile of meaningful work (MW) from a large sample of working adult musicians, addressing MW as multidimensional (following Steger et al., 2012) clarifying indicators for 1) *positive meaning in work*, 2) *meaning-making through work*, 3) *greater good motivation* and 4) *overall meaningful work* (RQ 4.4) and describing trends for sex, age and type of musical activity (RQ 4.5);
- to clarify the relationship between global and work-domain meaning for professional musicians, confirming whether an individual's search for global meaning can be satisfied by work meaning as previous research has highlighted (RQ 4.6);
- 4) to clarify the relationship of global and work-domain meaning with broad wellbeing and illbeing indicators in the case of musicians (RQ 4.7) and
- 5) to place musicians in the broader performing arts context and explore differences in global-level and work-level meaning between musicians, dancers and actors (RQ 4.8). The following section describes the methodological choices made to achieve these aims.

## 7.2 Method

This section presents the method for the present study. It will start by describing the instruments used, their purpose, psychometric properties and the justification for their inclusion. This will be followed by the description of the participants for this study. The section ends with considerations on data preparation and analyses.

#### 7.2.1 Instruments

As discussed, one of the few studies attempting to profile musicians' wellbeing from a positive framework (Ascenso et al., 2018) highlighted meaning as the highest rated PERMA element. Previous qualitative accounts had also reinforced the role of meaning in sustaining wellbeing as a musician (Ascenso et al., 2016). These results raised new questions when conceptualizing a wellbeing profile for musicians. It remained to be clarified if the consistent self-report of a high sense of meaning was primarily linked with a global evaluation of meaning in life, dependant on an evaluation of meaning of work (given the occupational focus of the studies), or both. Furthermore, in the context of the cross-sectional study mentioned (Ascenso et al., 2018), meaning was assessed very briefly, based solely upon three items. Given its centrality in the results, and acknowledging the dangers of short measures, the need for a thorough assessment of meaning became evident. To align with the recent theoretical frameworks addressing the multidimensional nature of both global-level meaning and work-level meaning, Steger (2012)'s conceptualizations were adopted (see 7.1.2 and 7.1.4.2 for operational definitions). Part of the appeal of these proposals is the empirical validation they have received and the availability of two robust measures to address them: the *Meaning in Life* Questionnaire (MLQ) (Steger et al., 2006) for global-level meaning and the Work and Meaning Inventory (WAMI) (Steger et al., 2012) for work-domain meaning.

### 7.2.1.1 The Meaning in Life Questionnaire

#### 7.2.1.1.1 Purpose

As reviewed in section 7.1.1, both the experience of a sense of the *presence* of meaning and a *search* for meaning are of interest when evaluating meaning in life. The Meaning in Life Questionnaire (Steger et al., 2006) is a 10-item instrument assessing these two dimensions, each evaluated by five items. The Presence of Meaning subscale (MLQ-P) measures the extent to which participants perceive their lives as meaningful. The Search for Meaning subscale (MLQ-S) assesses the extent to which people are actively seeking to find meaning in their lives.

As Steger and Shin (2010) point out, the development of the scale drew upon a subjective, constructivist perspective sustaining that the judgment about meaning in life is best made by the person themself. Contrary to other meaning measures, with the MLQ no predetermined values and constraints are implied about how people should define meaning in their lives. Building on the work of previous humanistic scholars (e.g. Frankl, 1966), it is assumed that each individual constructs their own life's meaning uniquely. As discussed in Chapter 3, this is in line with the approach also taken for subjective wellbeing assessment (e.g., Lyubomirsky & Lepper, 1999; Diener et al., 1985).

The MLQ was developed from a need to have a robust measure that could aid counselling professionals in accurately assessing meaning of life, a fundamental cornerstone of psychological support, particularly within humanistic frameworks. A key aspect driving the scale's development was that it was designed to fix some of the problems of previous meaning scales, which typically included other constructs such as depression, suicide and positive emotions, often yielding conceptual confusion (Steger & Shin, 2010). The items built for the MLQ contain no content other than meaning and purpose content (Steger et al., 2006).

The MLQ has been widely used, including in large-scale public health surveys (e.g. International Wellbeing Study, U.S. Centers for Disease Control, Oxford Poverty and Human Development Institute). One of the MLQ's strengths, receiving growing attention, is its ability to distinguish between presence and search for meaning. The scale takes about 3-5 minutes to complete.

### 7.2.1.1.2 Scoring and Psychometrics

The two dimensions of Presence of meaning (MLQ-P) and Search for meaning (MLQ-S) are assessed using 10 items rated on a seven-point scale (1 = *Absolutely Untrue*, 7 = *Absolutely True*). The Presence sub-scale (items 1, 4, 5, 6, and 9) measures the extent to which life is perceived as meaningful (e.g., "I understand my life's meaning"), and the Search sub-scale (items 2, 3, 7, 8, and 10) measures motivation to find life meaning (e.g., "I am searching for meaning in my life"). Presence and Search scores are obtained by the sum of scores from the items on each subscale. The full scale and scoring instructions are presented in Appendix 7.1.

Scores range from 5 to 35 for each subscale, with higher scores representing higher levels of Presence of meaning and Search for meaning.

The MLQ has proven to offer psychometric improvements over other meaning in life measures. The most prominent are a stable factor structure, high reliability, the expected relationships with related variables and better discriminant validity (Steger et al., 2006; Steger, Sullivan, et al., 2008; Steger, Kawabata et al., 2008). Internal consistency has been demonstrated for each set of items in multiple samples with coefficients above .80 and confirmatory analyses across studies have reaffirmed its two-factor structure (Park et al., 2010; Schulenberg et al., 2011; Steger et al., 2006; Steger, Oishi, et al., 2009; Steger & Shin, 2010; Steger & Kashdan, 2007). MLQ scores have also shown good testretest reliability for a two week-period (Steger, 2006), one-month period (Steger et al., 2008) and moderate stability over a 13-month period (Dik et al., 2008; Steger et al., 2006; Steger & Kashdan, 2007).

MLQ's construct validity has been established both through demonstrating its convergent validity as well as through discriminant validity analyses. The validation study presents the expected pattern of correlations between the MLQ and a number of wellbeing, personality and religiosity variables (Steger et al., 2006). This has been consistently replicated across studies (Dik et al., 2008; Kashdan & Breen, 2007; Steger et al., 2010). Presence of meaning is positively associated with perceived happiness, satisfaction with life, gratitude, self-esteem, and negatively related to undesirable outcomes such as anxiety ,depression and post-traumatic stress. Also of note is a negative association with materialism and experiential avoidance (Duffy & Raque-Bogdan, 2010; Kashdan & Breen, 2007; Steger, Oishi, et al., 2009; Steger & Shin, 2010; Park et al., 2010; Whittington & Scher, 2010). Crucially, the MLQ-P demonstrates overall better discriminant validity when compared with the two most used instruments in this domain, the *Purpose in Life Test* and the *Life Regard Index* (Steger et al., 2006).

The MLQ has been translated into over twenty five languages. Validation has been developed across countries, including: Argentina (Góngora & Solano, 2011); Turkey (Boyraz et al., 2013); China (Liu & Gan, 2010); Japan (Steger et al., 2008), Spain (Steger et al., 2008) and South Africa (Khumalo et al., 2014). Robust psychometric properties have prevailed across samples differing in sex, age, race and nationality (Brandstätter et al., 2012).

### 7.2.1.1.3 Justification for inclusion

As mentioned in Chapter 3, in the pursuit of addressing limitations of previous wellbeing profiles with musicians (Ascenso et al., 2018), the current study aims to investigate the experience of meaning as it relates to both life overall and to the work domain (RQ4). In the search for a measure that would allow an un-confounded assessment of meaning in life, while still maintaining brevity and robust psychometric properties, the MLQ emerged as the obvious choice, when compared the other popular measures in this domain (e.g. *Purpose in Life Test, Life Regard Index*). It allows a thorough assessment of both the extent to which someone reports meaning in life, and the level to which they are also seeking it, enabling us to also examine their interaction and ascertain how having meaning and searching for it can impact wellbeing both separately and/or concurrently.

#### 7.2.1.2 The Work and Meaning Inventory

#### 7.2.1.2.1 Purpose

The *Work and Meaning Inventory* (WAMI; Steger et al., 2012) was developed in an effort to provide a brief, theoretically-driven measure of meaningful work. It has increased its presence across research outputs in recent years and has also served as a popular tool in counselling (Steger et al., 2012).

The scale assesses the three primary dimensions that emerged from Steger et al. (2012)'s thorough review on meaningful work, with one subscale for each dimension: *Positive Meaning, Meaning-Making through Work*, and *Greater Good Motivations*. The authors point to the *Positive Meaning* sub-scale as the "flagship" indicator of meaningful work. Scores on *Positive Meaning* represent the extent to which individuals find their work to carry personal meaning, significance or purpose (Steger et al., 2012). The *Meaning-Making through Work* sub-scale captures the extent to which work represents a source of broader meaning in life, in other words, how work helps people in making sense of their lived experience as a whole. Finally, the *Greater Good Motivations* score represents the extent to which individuals see their effort at work as making a positive contribution and benefitting others (Steger et al., 2012). The WAMI also allows for a total composite *Meaningful Work* score (Steger et al., 2012). As the authors note, the overall score reflects "the depth to which people experience their work as meaningful, as something they are personally invested in, and which is a source of flourishing in their lives" (Steger et al., 2011, p. 2).

#### 7.2.1.2.2 Scoring and Psychometrics

The WAMI comprises of 10 items scored on a five-point Likert scale, from 1 (absolutely untrue) to 5 (absolutely true). *Positive Meaning* is measured with four items, including "I understand how my work contributes to my life's meaning." *Meaning making through work* is assessed with three items (e.g. "I view my work as contributing to my personal growth"). Finally, *Greater good motivations* are also measured with three items

(e.g.," I know my work makes a positive difference in the world"). Separate scores for the three subscales are obtained by summing the relevant items. Higher scores represent higher meaningful work. For the total overall *Meaningful Work* score the *Positive Meaning, Meaning-making through Work,* and *Greater Good Motivations* scores are added together. The full scale and scoring procedure can be found in Appendix 7.2.

The scale's development study presents high reliability indicators ( $\alpha$ 's from .82 to .89 for subscale scores and .93 for total scores), along with solid estimates for factor structure (Steger et al., 2012). High reliability has since been replicated (e.g. Tims et al., 2016). The case for WAMI's construct validity is also robust. In validating the scale, Steger and colleagues found the expected pattern of correlations for total and subscale scores with measures of wellbeing, and work-related outcomes (e.g. job satisfaction, days absent from work, work motivation). Crucially, WAMI's total score explains incremental variance in job satisfaction beyond key variables such as withdrawal intentions, organizational commitment and a calling orientation to work (Steger et al., 2012).

### 7.2.1.2.3 Justification for Inclusion

Of the limited pool of instruments available to measure meaningful work (MW), only a very small number present a sound rigorous psychometric evaluation. Furthermore, even if psychometrically sound, often several definitions of meaningful work are behind their construction and importantly, the measures do not always align with the operational definitions of the construct they set out to address. The WAMI is a theoretically-driven measure on MW with a rigorous psychometric evaluation. It allows for a multidimensional assessment, capturing the experience of positive meaning in work, the extent to which work is considered to be a means for making meaning more broadly and one's perception of how work benefits the greater good. This secures the muchneeded refinement on meaning assessment that previous research with musicians has left unaddressed. All participants in this study also responded to the *Satisfaction with Life Scale* and the *Kessler Scale of Psychological Distress (K6)* (see chapters 5 and 6 for scale details).

### 7.2.2 Participants

The recruitment strategy for the overall project is described in Chapter 4. Two different samples participated in this study. A first sample, comprising of both professionals and student musicians, answered the *Meaning in Life Questionnaire (MLQ)*. A second sample, comprising only of professionals, answered the *Work and Meaning Inventory (WAMI)*. 25 students who reported already maintaining weekly professional engagement in music were also included in Sample 2. Similarly to studies 1 and 2, a sample of performing artists from other domains (dance and theatre) were recruited for comparison.

A total of 1130 responded to the *MLQ* with 943 (83.5%) providing a complete data set. Of these, 82.1%, (n = 774) were musicians and the remaining 17.9% (n = 169) worked in other performing arts (theatre and dance). Of the latter, seven participants further reported their main source of activity to be outside of the performing arts and were excluded from the study, leading to a total of 162 participants in the "other performing arts" group. Further details on the dancers and actors sub-group is presented in section 7.3.5.

60.7% of participants were women (n = 470) and 40.3% (n = 304) were men (n = 304). Ages ranged from 18 to 87, with a median of 35 and a mean of M = 37.04 years (*SD* = 14.5). Frequencies per age category are presented in Figure 7.1.



Figure 7.1. Frequencies per age category for Sample 1 (professionals and students)

The sample represented 61 nationalities, across the five continents. Europe was the most represented continent for nationality, accounting for 61.9% of the sample, followed by North America with 19.7%, South America with 6.6%, Oceania with 5.8%, Asia with 4% and Africa with 1.9%. British (n = 143) was the most represented group, accounting for 18.7% of the sample. The full distributions per nationality by country and continent are presented in Appendix 7.3 and 7.4.

For geographical region of work/study, Europe was also the most represented, with 62%, followed by North America with 20%, South America with 5%, Oceania with 5%, Asia with 2% and Africa 1%. In addition, 5% of the sample reported working internationally and not being based at one particular country alone. Forty-seven countries of work/study were represented. The UK and Ireland were the most represented accounting for 23.2% of the overall sample together. Full distributions regarding geographical area of work/study are presented in Appendix 7.5 and 7.6.

Participants were asked to describe their main activity, as the one in which they spend the majority of a typical week engaging with. 74.5% of the sample were professionals (n = 577), with the remaining 25.5% (n = 197) being students in music degrees. Among the professionals, the largest group (42.3%, n = 244) were primarily

engaged in performance, followed by 35.1% (n = 201) in teaching, 15.6% (n = 90) in composing and 7.3% in conducting (n = 42). Table 7.1 presents the frequencies for each category of professional activity reported. The 201 teachers were spread across different teaching levels, with the large majority accumulating more than one level.

ACTIVITY		FREQUENCY	PERCENT	
PERFORMER	Soloist	70	42.3	
	Ensemble – orchestra	97		
	Ensemble – choir	16		
	Ensemble – chamber instrumental	26		
	Ensemble – other	35		
COMPOSER		90	15.6	
CONDUCTOR		42	7.3	
TEACHER		201	35.1	
TOTAL		577	100	

Table 7.1. Frequencies per principal area of musical activity for the professional sub-sample

Table 7.2 presents the distribution per area of primary specialism<sup>60</sup> for the musician sample (professionals and students). Strings were the most represented group with n = 162 (21.1%), followed by keyboard instruments (piano, harpsichord and organ) with n = 130 (16.8%).

<sup>&</sup>lt;sup>60</sup> This question was optional and six musicians chose not to provide this information.

	FREQUENCY	PERCENT
Strings	162	21.1
Woodwinds	112	14.6
Brass	54	7
Keyboard	130	16.8
Voice	131	16.9
Percussion	10	1.3
Composition	106	13.7
Conducting	45	5.8
Music Theory, Ear Training	18	2.3
Missing	6	.8
TOTAL	774	100

Table 7.2. Frequencies and percentages per category of primary specialism (professionals and students)

From the professionals in the sample, 98.6% (n = 569) provided further details about their professional situation: 36% (n = 204) reported being on a contract, 62.3% working on a freelance basis (n = 356), 0.9% (n = 5) in a situation where both contract and freelance work described their typical week and 0.7% (n = 5) retired<sup>61</sup>. The frequency table for professional situation is presented in Appendix 7.7.

Table 7.3 presents the frequencies per category of years of professional experience<sup>62</sup>. The majority of professionals (n = 225, 29.1%) had over 20 years of professional activity in music.

<sup>&</sup>lt;sup>61</sup> The retired musicians provided further information: despite being retired from their main job in music, they were still maintaining some professional activity. This determined their inclusion in the study.

<sup>&</sup>lt;sup>62</sup> This question was optional and five musicians chose not to provide this information.
YEARS	FREQUENCY	PERCENT
less than 5 years	93	12
5-10 years	168	21.7
10-15 years	152	19.6
15-20 years	131	16.9
more than 20 years	225	29.1
TOTAL	769	100

Table 7.3. Frequencies and percentages for years of professional experience in music for the professional sub-sample

The large majority of the sample reported working in Western classical music as their primary genre (94.7%), followed by jazz (2.8%) and other genres accounting for 1.9% of the sample which included pop, traditional folk music, blues and world music. The full frequency distribution for musical genre is presented in Appendix 7.8.

Of the 577 professionals, 57% (n = 329) provided further details about other professional activities they maintained. Despite having music as their main activity on a typical week of work, 164 musicians reported holding a parallel career. Similar to the samples for studies 1 and 2, the most represented professional occupations were arts management and administration (14.6%) and teaching (outside music) (9.2%) (see Appendix 7.9).

For the *Work and Meaning Inventory* assessment, 707 professionals provided a full dataset. This sample had very similar characteristics to the professional sub-sample who answered the *Meaning in Life* questionnaire described above.

#### 7.2.3 Data preparation and analyses

Only cases with no missing values were used for both instruments. No univariate outliers were removed given that they did not affect any assumptions. Despite moderate

skewness, the data was not transformed given that this did not affect the distribution of residuals.

Descriptive statistics were calculated for all scales and sub-scales as well as Pearson correlations between the variables of interest. GAM analyses were used to check for potential non-linear relationships when analysing the relationship of age with MLQ and WAMI scores. To test for group differences, variables were entered into a General Linear Model (GLM) with gaussian errors. Analyses of covariance were run to compare MLQ and WAMI scores across groups with different types of musical activity, and across the three performing arts, while controlling for the possible confounding effects of sex and age, when relevant. Moderation models were computed to ascertain potential moderating effects of MW in the relationship between psychological distress and meaning in life. To ascertain unique variance of MW in predicting Life Satisfaction above meaning in life, hierarchic multiple regression analyses were run, after confirming there was no multicollinearity.

Analyses were performed using IBM SPSS Statistics for Windows, version 25.0 (IBM Corp., Armonk, NY, United States). Moderation models were tested using the Process macro v. 3.5 (Hayes, 2018) and graphical representations drawn using Jamovi's medmod module (version 1.6.3) (The Jamovi project, 2020).

### 7.3 Results

This section is organized following the five aims for this study. First, we present a profile of musicians' meaning in life scores as measured by the MLQ, looking both at *presence* of meaning and *search* for meaning, in a sample including professionals and students (RQ 4.1, 4.2 and 4.3). This is followed by a profile of meaningful work (MW) for professional musicians, clarifying indicators for 1) *positive meaning in work*, 2) *meaning-making through work* and 3) *greater good motivation* as well as 4) *overall meaningful work*, as measured by the *Work and Meaning Inventory (WAMI)* (RQ 4.4 and RQ 4.5). We then clarify the relationship between global and work-domain meaning for professional musicians (RQ 4.6). This is followed by the results on the relationship between global and

work-domain meaning with broad wellbeing and illbeing indicators (SWLS and K6) (RQ 4.7). Finally, to place musicians in the wider performing arts context, we present differences in global-level and work-level meaning between musicians, dancers and actors (RQ 4.8).

#### 7.3.1 Meaning in life profile

The first aim for this study was to explore musicians' profile of meaning in life, in both dimensions of the construct: presence of meaning and search for meaning.

Descriptive statistics allowed to observe that musicians scored highly in both dimensions. The mean score for the *Presence of meaning* subscale (MLQ-Presence) was  $M = 26.7 (\pm 5.9, SE = .22)$ , with a median of 28 and scores ranging from 5 to 35. The first quartile value was 23 and the interquartile range was 8. Internal consistency was excellent with a Cronbach's alpha of  $\alpha = .902$ .

The mean score for the *Search for meaning* subscale (MLQ-Search) was M = 23.3 (±7.3, SE = .26), with a median of 24 and scores ranging from 5 to 35.75% of observations were above 19. The interquartile range was 10. This subscale also demonstrated good internal consistency ( $\alpha = .885$ ), close to that of the scale's development study (Steger et al., 2006). Item inter-correlations ranged from -.009 to .801 (see Appendix 7.10 for correlation matrix).

In order to verify the relationship between presence of meaning and search for meaning, Pearson correlations were run. There was a very weak negative correlation between *Presence of meaning* and *Search for meaning* (r(772) = -.130, p < .001), showing how these two components are almost independent.

Independent-samples t-tests were run to explore differences between sexes. There were no significant differences between men and women for *MLQ-Presence* (women:  $M = 26.5, \pm 5.97$ , men:  $M = 27.1, \pm 6.03, t(772) = -1.25, p = .21, d = .12$ ) and *MLQ-Search* (women:  $M = 23.5, \pm 7.12$ , men:  $M = 22.9, \pm 7.67, t(772) = 1.14, p = .26, d = .11$ ). In order to clarify possible U-shape trends for age in relation to the MLQ found in previous studies (Allan et al., 2016), a GAM fit was used to check for non-linear relationships for age-presence, age-search and presence-search. Effective degrees of freedom (edf) for all GAM models were 1, denoting linear relationships hence, there seemed to be a linear trend with age and therefore linear models were subsequently used.

There was a small positive correlation between age and *Presence of meaning* (r(772) = .236, p < .001) and a very small negative correlation between age and *Search for meaning* (r(772) = .195, p < .001).

Table 7.4 presents mean scores, standard errors and standard deviations for the MLQ subscales across age groups.

Table 7.4. Mean scores, standard errors and standard deviations for the MLQ subscales across age groups

Age Category					
Sub-scal	le 18-24	25-44	45-64	65 and over	
MLQ-P	25.2 (±6.2, SE=.4)	26.3 (±5.9, SE=.3)	28.3 (± 5.5, SE= .4)	30.4 (±4.3, SE=.7)	
MLQ-S	24.9 (±6.6, SE=.5)	23.4 (±7.1, SE=.4)	21.7 (±7.8, SE=.6)	20.1 (±8.7, SE= 1.4)	

A small, gradual increase in mean scores for *Presence of meaning* was observed as age increased (F(1,769) = 43.25, p < .0001, b = .096, SE = .02). For each year of age, there was an increase in 0.096 points in *Presence of meaning*. A small, gradual decrease in mean scores for *Search for meaning* was also observed as age increased (F(1,768) = 28.58, p < .0001, b = -.09, SE = .02). The overall interaction between sex and age was non-significant (F(1,769) = 2.12, p = .15). Figure 7.2 shows mean scores for *Presence of meaning* across age categories for men and women.



Figure 7.2. Mean scores for *Presence of meaning* across age categories by sex

There was a similar pattern of a small but steady increase in *Presence of meaning* for both sexes. For men, the values for the 18-24 and 25-44 categories are more similar than for women, although the mean difference between women and men even in the 18-24 category (where differences are greater) is non-significant (t(193) = -1.71, p = .09, d = .26).

Figure 7.3 shows mean scores for *Search for meaning* across age categories for men and women. A similar pattern to that of *Presence of meaning* was observed in the opposite direction, with a very small steady decrease in *Search for meaning* with age, for both sexes (F(1,772) = 28.58, p < .0001, b = -.097, SE = .02). The interaction between sex and age was non-significant (F(1,768) = .11, p = .74).



Figure 7.3. Mean scores for *Search for meaning* across age categories by sex

Analyses of co-variance showed no significant differences between professionals (n = 577) and student musicians (n = 197) for MLQ-Presence  $(F(1,768) = .39, p = .53, \eta^2 < .001)$  and for MLQ-Search  $(F(1,768) = .36, p = .55, \eta^2 < .001)$  when controlling for the effects of sex and age. Similarly, when controlling for sex and age and comparing mean scores for the different music specialisms, no differences were found  $(F(8,754) = 1.43, p = .18, \eta^2 < .01)$ .

Figure 7.4 shows mean scores for MLQ-Presence and MLQ-Search for the categories of primary activity.



Figure 7.4. Mean scores for Presence of meaning and Search for meaning across types of activity

All categories of type of activity reported a mean score well above the mid-point of the scale. Despite students reporting lower *Presence of meaning* than any other category and greater *Search for meaning*, the effect was largely driven by age, and when controlling for the effects of age and sex in an ANCOVA, it lost significance (*F*(1, 766) = .38, p = .54,  $\eta^2 < .001$ ).

When looking at the professional sub-sample, an ANCOVA controlling for the effects of age and sex revealed there were significant differences across types of musical activity on *Presence of meaning* (*F*(5,566) = 3.52, *p* = .004,  $\eta^2$  = .03). Post-hoc comparisons with Bonferroni adjustment showed orchestral musicians scored lower in *presence of meaning* when compared to soloists (*p* = .002). The same analyses revealed no significant differences in *Search for meaning* across the categories of type of professional activity (*F*(5, 566) = 1.79, *p* = .11,  $\eta^2$  < .001).

#### 7.3.2 Meaningful work profile

The second aim of this study was to explore musicians' profile of meaningful work (MW), measured by the Work and Meaning Inventory (WAMI), across its three subscales: Positive meaning in work (PM), Meaning-making through work (MM) and Greater good motivation (GG).

Descriptive analyses for the three sub-scales and the total scale were run to observe musicians' MW profile. Table 7.5 presents mean, median, standard error, standard deviation and  $25^{\text{th}}$  percentile values for the three WAMI sub-scales and for the total scale, for the professional musicians who provided a full dataset (*n* = 707).

	WAMI Scale					
Positive		Meaning making	Greater good	Meaningful Work		
	Meaning (PM)	through Work (MM)	motivation (GG)	total (MW)		
Scale range	(4-20)	(3-15)	(3-15)	(10-50)		
Mean	16.9	12.3	11.9	41.2		
Standard error	.12	.09	.09	.28		
Median	17	13	12	42		
Std. Deviation	3.23	2.57	2.59	7.42		
25 <sup>th</sup> percentile	16	11	10	37		

Table 7.5. Descriptive statistics for the three WAMI sub-scales and for the overall scale for professional musicians (n = 707)

For all sub-scales, the scores spanned the entire possible range of responses (4-20 for PM and 3-15 for the MM and GG sub-scales). 75% of all observations were very high for all scales, as can be seen by the 25<sup>th</sup> percentile indicators: 16 for *Positive meaning* (in a span of 4-20), 11 for *Meaning-making through work*, 10 for *Greater good motivation* (both in a span of 3-15) and 37 for overall meaningful work (in a span of 10-50).

Internal consistency was good across all sub-scales, with a Cronbach's alpha of  $\alpha$  = .881 for PM,  $\alpha$  = .791 for MM and  $\alpha$  = .773 for GG (see Appendix 7.11 for the item correlation matrix). The highest rated item was "I view my work as contributing to my

personal growth" (M = 4.36). The PM subscale received the highest average rating per item (4.23), followed by the MM (4.09) and GG (3.99). The three WAMI subscales were highly intercorrelated (.66-.76) and highly correlated with the total score (.83-.93). See Appendix 7.12 for full matrix.

The correlations between age and each of the WAMI sub-scales were very weak (all r < .2). Older musicians were only slightly more likely to find positive meaning in their work (r(705) = .164, p < .001), to perceive work as a source for meaning-making (r(705) = .107, p = .004) and to hold greater good motivations (r(705) = .106, p = .005). The correlation between age and the *Overall meaningful work* scale was r(705) = .146 (p < .001).

There were no significant differences between men and women for PM (p = .612), MM (p = .920) and the Total scale (p = .233). For the GG sub-scale, analyses of co-variance controlling for the effect of age, revealed that women (M = 12.1, ± 2.59, SE = .12) scored higher than men (M = 11.8, ±2.57, SE = .14) (F(1, 682) = 4.82, p = .03), although with a very small effect size ( $\eta^2$  = .007). There were no significant differences across categories of years of professional experience for any of the WAMI scales, when controlling for the effects of age and sex (p = .110 for PM, p = .743 for MM, p = .118 for GG and p = .244 for the total scale).

Figures 7.5-7.8 present means and standard errors (+/-1 SE) for each WAMI subscale and Total scale, across the six types of professional activity in music. A one-way ANOVA revealed significant differences across type of activity for PM (F(5,701) = 3.79, p = .002). Post hoc pairwise comparisons with Bonferroni adjustment revealed lower observed positive meaning in work for orchestral musicians compared to soloists (p = .006) and teachers (p = .013). All effect sizes were small ( $\eta^2 < .03$ ).



Figure 7.5. Means and standard errors for *Positive meaning* by type of professional activity

When controlling for the effect of age in an ANOVA, the pattern was maintained, and there was a further significant difference between soloists and ensemble musicians (p = .048).

For the *Meaning-making through work* sub-scale (Figure 7.6), there were also significant differences across categories of activity (F(5, 701) = 4.72, p < .001) with soloists scoring significantly higher than both orchestra (p = .001) and ensemble musicians (p = .041). When controlling for the effect of age, the effect remained significant at p < .001, with a further difference between composers and orchestral musicians, with composers scoring higher. Effect sizes were small ( $\eta^2 < .03$ ).



Figure 7.6. Means and standard errors for *Meaning-making through work* by type of professional activity

Results for the *Greater-good motivation* scale (Figure 7.7) also showed significant group differences (F(5,701) = 7.37, p < .001). Orchestral, ensemble and composer musicians showed extremely close means, the same pattern happening between soloists and conductors. Post hoc analyses revealed that teachers scored significantly higher than orchestral, ensemble and composer musicians (all at p < .001), a pattern that did not change when controlling for the effects of age and sex, although again with small effect sizes under .05).



Figure 7.7. Means and standard errors for Greater good motivations by type of activity

Finally, for the overall MW total scale (Figure 7.8), the significant differences across type of activity (F(5,701) = 3.79, p = .002,  $\eta^2 = .035$ ) were driven by the orchestral group, who scored significantly lower than teachers (p = .012) and soloists (p = .006). The pattern remained similar when controlling for the effect of age (p = .002 and p = .003, respectively).



Figure 7.8. Means and standard errors for Overall meaningful work by type of activity

To explore further trends, variable computation was deemed appropriate. First, we compared musicians having a primarily performance-based routine (soloist, orchestral, ensemble and conductor) with those whose performance was not at the core of their activity (teacher and composer). Non-performers scored significantly higher in *Greater good motivation* ( $M = 12.34, \pm 2.4$ ) when compared to performers ( $M = 11.6, \pm 2.7$ ) after controlling for the effects of sex and age ( $F(1, 674) = 11.81, p = .001, \eta^2 = .017$ ). No significant differences were found for the remaining scales.

Secondly, within the performers of the sample, we grouped the collaborative musicians together (orchestral, and ensemble musicians) versus those professionals whose routine is primarily individually-led (soloists and conductors). Controlling for the potential effects of sex and age, there were significant differences between collaborative and non-collaborative musicians across the three WAMI sub-scales and *Overall meaningful work* score (F(3,325) = 6.42, p < .001,  $\eta^2 = .056$ ), with collaborative musicians

scoring significantly lower for all (PM: p = .039, MM: p = .037, GG: p = .020, OMW: p = .040).

### 7.3.3 Relationship between global-domain and work-domain meaning

The third aim of this study was to explore how meaning in life and meaningful work are related among musicians.

Table 7.6 shows the correlations between the WAMI and the MLQ scores for the sub-sample of professionals. All WAMI scales were positively and moderately correlated with *Presence of meaning* in life. The correlations between the WAMI subscales and *Search for meaning* were negligible.

	1	2	3	4	5	6
Meaningful Work (WAMI)						
1. Positive Meaning in Work	1					
2. Meaning making through work	.759**	1				
3. Greater good motivation	.655**	.570**	1			
4. Meaningful work total score	.928**	.877**	.833**	1		
Meaning in Life (MiLQ)						
5. Presence of meaning	.609**	.503**	.496**	.614**	1	
6. Search for meaning	118**	028	043	076	129**	1

Table 7.6. Correlations between the WAMI scores and the MiLQ meaning in life sub-scales

\*\*. Correlation is significant at the 0.01 level (2-tailed).

Meaningful work is, across all its components, moderately related to meaning in life for musicians. The search for meaning in life is broadly independent from meaningful work for musicians.

# 7.3.4 Meaning in life and meaningful work in relation with wellbeing and illbeing indicators

The fourth aim for this study was to explore the relationship between both meaning in life and meaningful work with wellbeing and illbeing indicators. *Life satisfaction* and *Psychological distress* were used for such analysis.

#### 7.3.4.1 Life Satisfaction

Presence of meaning was positively correlated with Life satisfaction (LS) (r(934) = .456, p < .01). The correlation between Search for meaning and LS was very small (r(934) = -.114, p < .01).

Of the meaningful work sub-scales, the WAMI-PM subscale showed the stronger bivariate correlation with LS (r(699) = .396) although still small, followed by WAMI-MM and WAMI-GG (r(699) = .347 and r(699) = .263, respectively, all at p < .01).

The relationship between LS and *Presence of meaning* was similar for all age groups and there was no significant interaction effect (F(1,763) = .0003, p = .98). The same was observed for *Search for meaning*, with no interaction effect and similar correlations with LS across ages (F(1,763) = .45, p = .51).

To explore if meaningful work provides a unique contribution to additional variance in life satisfaction above the variance accounted for by meaning in life, hierarchical regression analyses were run. *Life satisfaction* was regressed on *meaning in life (presence)* and *meaningful work (MW)* using the WAMI – PM sub-scale (the flagship sub-scale of the measure). MW was added as a predictor in the second step. MW added an extra .024 in explaining *Life satisfaction* variance, which represents a 11% increase in relation to the initial meaning in life R<sup>2</sup> (regression tables are presented in Appendix 7.13). Meaningful work provides a unique contribution towards musicians' life satisfaction, beyond that of meaning in life.

Partial correlation analyses controlling for the effect of age revealed a moderate negative correlation of (r = -.420, p < .001) between *Presence of meaning in life* and *Psychological distress*.

A closer look allowed to observe that the relationship between *Presence of meaning* and *Psychological distress* varied significantly across age, evident by a significant interaction effect (F(1, 763) = 6.02, p = .02). Figure 7.9 depicts this effect showing the relationship between *Presence of meaning* and *Psychological distress* across different age ranges throughout the lifespan<sup>63</sup>. For younger musicians the negative relationship between the two variables is stronger and progressively loses strength as age increases.



Figure 7.9 Interaction effect of age in the relationship between *Presence of meaning* in life (MLQ-P) and *Psychological distress* (K6)

<sup>&</sup>lt;sup>63</sup> Note: the analysis software generated these six categories by splitting the age-continuous variable. This serves just to visually show the effect. The specific cut-off points for age were not purposeful.

Controling for the effect of age, psychological distress predicted *Search for* meaning (F(1,762) = 15.37, p < .001, b = .23, SE = .06).

*Psychological distress* was negatively correlated with all WAMI sub-scales (PM: r(704) = -.329; MM r(704) = -.246; GG: r(704) = -.251; OMW r(704) = .317, all at p < .001).

We were interested in understanding if meaningful work influenced the strength or direction of the relationship between psychological distress and meaning in life. In other words, if experiencing meaning in one's work as a musician made any difference to the negative relationship between psychological distress and meaning in life. Moderated multiple regression analyses were run testing for the moderating effect of each of the WAMI subscales on the relationship between psychological distress (predictor) and meaning in life (dependent variable). Results showed a significant interaction effect. The negative relationship between *Psychological distress* and *Presence of meaning* was moderated by *Meaningful work*. This was evident for two of the WAMI subscales: PM and GG. Both followed the same pattern: the higher the meaningful work, the weaker the negative relationship between distress and life meaning (see tables 7.7 to 7.10 for moderation estimates and figures 7.10 and 7.11 for plots).

Table 7.7. Estimates for a moderation effect of meaningful work (WAMI PM) in the relationship between *Psychological distress* (K6) and *Presence of meaning* in life

Moderation Estimates						
Estimate	SE	Z	р			
-0.2679	0.0438	-6.11	<.001			
0.9254	0.0573	16.16	<.001			
0.0226	0.0114	1.98	.048			
	es <b>Estimate</b> -0.2679 0.9254 0.0226	Estimate SE   -0.2679 0.0438   0.9254 0.0573   0.0226 0.0114	Estimate SE Z   -0.2679 0.0438 -6.11   0.9254 0.0573 16.16   0.0226 0.0114 1.98			

	Estimate	SE	Z	р
Average	-0.267	0.0440	-6.06	<.001
Low (-1SD)	-0.341	0.0507	-6.72	<.001
High (+1SD)	-0.193	0.0638	-3.03	.002

# Table 7.8. Slope estimates for a moderation effect of meaningful work (WAMI PM) in the relationship between *Psychological distress* (K6) and *Meaning in life*

Note. shows the effect of the predictor (K6) on the dependent variable (MiLQ\_Presence) at different levels of the moderator (WAMI\_PM)

# Table 7.9. Estimates for a moderation effect of meaningful work (WAMI GG) in the relationship between *Psychological distress* (K6) and *Meaning in life*

	Estimate	SE	Z	р
К6	-0.3585	0.0474	-7.56	<.001
WAMI_GreaterGood	0.9116	0.0766	11.90	<.001
K6 * WAMI_GreaterGood	0.0343	0.0165	2.07	0.038

# Table 7.10. Slope estimates for a moderation effect of meaningful work (WAMI GG) in the relationship between *Psychological distress* (K6) and *Meaning in life*

<u> </u>				
	Estimate	SE	Z	р
Average	-0.359	0.0475	-7.56	<.001
Low (-1SD)	-0.448	0.0553	-8.10	<.001
High (+1SD)	-0.270	0.0718	-3.76	.002

Note. shows the effect of the predictor (K6) on the dependent variable (MiLQ\_Presence) at different levels of the moderator (WAMI\_GreaterGood)



**Psychological Distress** 

Figure 7.10. Plot for meaningful work (WAMI PM) as a moderator in the relationship between *Psychological distress* (K6) and *Meaning in life* 



Figure 7.11. Plot for of meaningful work (WAMI GG) as a moderator in the relationship between *Psychological distress* (K6) and *Meaning in life* 

Meaningful work acts as a protective factor for musicians, against the negative effect of psychological distress on meaning in life.

#### 7.3.5 Comparisons between musicians and other performing artists

Finally, besides the investigation of musicians' trends on global and work-domain meaning, this study aimed to place musicians' results in relation to areas of activity which are close to music in the behavioural routines they entail (i.e. artistic practices) (RQ 4.8). Thus, performing artists are of special interest. Given the general oblivion to performing artists in occupational health literature, no data on MIL and MW was previously available for this group. Furthermore, most studies using the WAMI have investigated heterogeneous samples, including several disparate professions in the same sample, hindering possibility for comparisons. For that reason, a sample of performing artists from dance and theatre was recruited (see Chapter 4 for full recruitment details).

162 adult performing artists took part. Of these, 62% (n = 101) were dancers and 38% (n = 61) were actors, with a mean age of 32.3 years (±11.8), a median of 28, and a range from 18 to 71 years; 79.6% (n = 129) were women, 19.7% were men (n = 33). Twenty-six nationalities participated, with British being the most represented, accounting for 50.6% of the sample, followed by American at 17.2%. Similarly to the musician sample, the majority of dancers and actors were professionals (70.4%, n = 114) with the remaining currently training as dance and theatre students in higher education (29.6%, n = 48). Similarly to the musician sample, most dancers and actors worked in the UK (55.5%), followed by the USA at 16%, with the remaining participants spread across 16 other countries. 6.8% maintained an international working pattern.

#### 7.3.5.1 Meaning in life

Figure 7.12 presents the mean scores and standard errors for the *Presence* of meaning and Search for meaning sub-scales of the MLQ for musicians ( $M = 26.7 \pm 6, SE$  = .22 for *Presence*,  $M = 23.3 \pm 7.3$ , SE = .26 for Search), dancers ( $M = 25.2, \pm 6.21$ , SE = .62 for

*Presence*,  $M = 22.8 \pm 6.36$ , SE = .67 for *Search*) and actors ( $M = 25.6, \pm 6.23$ , SE = .79 for *Presence*,  $M = 23.7 \pm 6.78$ , SE = .81 for *Search*).

To compare musicians' MLQ scores with those of dancers and actors, controlling for the effects of sex and age as potential confounders, ANCOVAs were run for each subscale. There were no significant differences across groups for both *Presence of meaning* (F(2, 933) = 1.22, p = .29,  $\eta^2 = .002$ ) and *Search for meaning* (F(2, 933) = .75, p = .47,  $\eta^2 = .001$ ).



Figure 7.12. *Presence of meaning* and *Search for meaning* scores and standard errors for musicians, dancers and actors

#### 7.5.5.2 Meaningful work

A sub-sample of professional dancers (n = 74) and actors (n = 55) provided a full data set for the *Work and Meaning Inventory*. Figure 7.13 presents the mean scores and standard errors for the three subscales and overall score for musicians (n = 707), dancers (n = 74) and actors (n = 55).



Figure 7.13. Mean scores and standard errors for the *Work and Meaning Inventory* sub-scales and total scale for musicians, dancers and actors

Analyses of co-variance controlling for the effects of age and sex revealed no significant differences for mean scores between the three groups for all sub-scales and for the overall meaningful work score (PM: F(2,833) = .400, p = .53;  $\eta^2 = .001$  MM: F(2,833) = 1.13, p = .29,  $\eta^2 = .000$ ; GG: F(2,833) = 1.35, p = .25,  $\eta^2 = .002$  and Overall MW: F(2,833) = 1.08, p = .29,  $\eta^2 = .001$ ).

Overall, musicians and other performing artists hold similar work-domain meaning trends.

### 7.4 Discussion

The purpose of Study 3 was to clarify musicians' profile on global and workdomain meaning, guided by RQ4:*What is musicians' profile of meaning in both global life and the work domain?* 

This question was addressed through a profile of multidimensional meaning in life (presence and search) and multidimensional meaningful work (PM, MM, GG) (RQ 4.1, 4.2 and 4.3); the investigation of trends for sex, age and type of musical activity (RQ 4.4 and 4.5); the observation of the relationships between global and work meaning among each other and with wellbeing and ill-health indicators (RQ 4.6 and 4.7) and the comparison between musicians' scores with other performing artists (RQ 4.8).

This section presents considerations on the results of this study, its limitations and suggestions for further research.

#### 7.4.1 Meaning in life profile

The first aim set for this study was to draw a profile of MIL for musicians (professionals and students), addressing it as multidimensional through clarifying both indicators of *presence* of meaning and *search* for meaning (RQ 4.1 and 4.2) as well as investigating trends across sex, age and type of musical activity (RQ 4.3.). Musicians' MIL scores as measured by the *Meaning in Life Questionnaire (MLQ)* were high. This was evidenced not only by a high mean (M = 26.7) but also by a striking 75% of observations above 23 (in a scale ranging from 5 to 35). The median was higher than the mean, denoting the left skewness of the distribution. This is in line with previous studies reporting a tendency for high values for MIL across samples (e.g. Steger et al., 2012). Musicians' presence of meaning are also in line with other samples when looking at demographic variables: no difference for men and women (echoing the results of Steger et al., 2006; 2012) and a very small increase with age (Morgan & Robinson, 2013; Fegg et al., 2007; Steger, 2012; Steger, Oishi, et al., 2009; Reker, 2005; Van Ranst & Marcoen, 1997). One aspect to note is that contrary to previous studies (Allan et al., 2015), there

was no quadratic pattern between age and presence of meaning and no mid-life "dip". The relationship was indeed weak but fairly linear. The age groups in our sample were unevenly represented (with a large majority of younger musicians), making it harder to identify any potential dip in later stages. Even so, there was a high number of musicians in the so-called "mid-life" bracket, a stage of life where a crisis around generativity vs. stagnation has been described (Erikson, 1950). Musicians in this stage showed a very small, but steady, increase in meaning with age. A greater representation of older musicians, especially after retirement age, could help clarify this trend further. Interestingly, the pattern of MIL across age groups is different from the pattern found for Purpose in Life (see Chapter 5, section 5.3.1.2.2), reinforcing again the need for rigorous operational definitions. As discussed in section 7.1, MIL and purpose, despite often used interchangeably, are different constructs.

Scores for *search for meaning* were also high (M = 23.3) with a median of 24. Once again, the left skewness was depicted by the median being higher than the mean. A striking 75% of the observations were above 19, clearly beyond the mid-point of the scale. Echoing findings from Steger et al. (2009), the current study also found a negative relationship between search for meaning and age. Furthermore, for the overall sample, musicians' search for meaning slightly decreases with the increase of presence of meaning, independently of age, although the correlation is small and almost negligible. Presence of meaning and search for it are almost independent (in line with Steger et al., 2008). This very small association along with musicians' high levels of presence of meaning leads to conclude that musicians' search for meaning is not necessarily driven by a lack of experience in meaning (presence) and therefore not a negative experience but rather an openness to explore, a pattern very much in line with what has been observed for eastern cultures (e.g. Li et al., 2018). For these groups, presence and search are not markedly connected. Research has highlighted clear cross-cultural influences in this. Belonging to a collectivistic versus an individualist culture and maintaining a more holistic approach to evaluating life rather than an analytic approach (Markus & Kitayama,

1991)<sup>64</sup> is linked with greater search for meaning. Independent cultures are characterized by a more analytic way of thinking about the world, while in interdependent cultures the tendency is to engage in more holistic evaluations. As a result of these modes of thought different levels of comfort with contradiction can occur (e.g. Bagozzi et al., 1999; Nisbett et al., 2001; Kitayama et al., 2003). In a highly international sample such as our own, this is a factor to consider. Musicians accultured in contexts prioritizing holistic reflections may be more comfortable with questioning their current meaning and searching for more. Artistic creativity has also been associated with intuitive and synthetic thinking, prioritizing integrative processes as opposed to analytic thinking (Feist, 1991). We can argue, in that light, that given our sample was mostly Western, the culture of the artistic sector itself can be fertile for by greater openness to change and to comfort with a continual search for meaning.

Besides the possible impact of cultural issues, a high search for meaning may also be experienced by different musicians differently, according to the stage they are in their search process. Wong (2012) proposes six stages for the process of searching for meaning, four of which could help explain our results: the "discovery stage (individuals have already experienced some success in finding meaning in the major domains of life); the completion stage (individuals cease their quests for meaning because they have found satisfactory answers to all their existential concerns), the emergency stage (something horrible happens and shatters the assumptive world of individuals, triggering a quest for meaning); and the stagnant stage (individuals get stuck in their search because they ask the wrong questions or come to conclusions that do not provide any closure or satisfaction)" (Wong, 2012, p. 31). A cross-sectional evaluation does not allow to understand the processes behind a fairly high score in search. The meaning behind the means for search could be very different across the group.

<sup>&</sup>lt;sup>64</sup> Markus and Kitayama (1991) have evidenced how key processes depend on whether the individual maintains an *independent* or an *interdependent* construal of the self. Attributing coherence to the social world, for example, will be experienced differently. For individuals with an independent view of self, there will be a heightened sensitivity to information relevant to one's self-defining attributes. For individuals with an interdependent view of self, information about significant others or about the self in relation to others will be more valued.

Overall, the pattern of high presence and high search is encouraging, given it has been associated with high wellbeing previously (Steger, 2012).

When looking at the different types of activity, orchestral musicians report experiencing less MIL than soloists, although these differences do not translate in differences in search for meaning. It's important to note that the mean for presence of meaning for orchestral musicians is still very high (M = 25.5, SE = .59). Further results on meaningful work and its role in contributing to global meaning help shed light into this result and will be discussed in the next sub-section.

#### 7.4.2 Meaningful work profile

The second aim of this study was to draw a profile of meaningful work (MW), addressing it as multidimensional (sub-question 4.4), clarifying indicators for the three dimensions captured by the WAMI: 1) *positive meaning in work*, 2) *meaning-making through work* and 3) *greater good motivation*, while also describing trends for sex, age and type of musical activity (sub-question 4.5).

Musicians score very high across the three dimensions of MW. This means that for musicians, work has a positive meaning and purpose, it helps create meaning in one's life and it provides the opportunity to benefit the greater good. Of note is the flagship indicator of MW (Steger et al., 2012), the *Positive meaning* subscale. Musicians score on average 16.92 (range 4 to 20) and crucially, 75% of musicians score above 16. The significant correlations found between the MW sub-scales and age can be consider negligible (all under .2). This is in line with previous research (Steger et al., 2012).

Finally, there were clear differences in MW across the types of musical activity. The trends favour soloists and highlight an overall lower pattern for orchestral and ensemble musicians. It is important to note, however, that these groups still maintain high levels across all sub-scales. This means that orchestral and ensemble musicians, as all other groups, still experience work a carrying positive meaning, as a source for creating meaning in one's life and as making a difference to the world. Some activities seem to be, however, enabling higher perceptions across these dimensions. Overall, soloists stand out as drawing more meaning from work than the rest, but not in sustaining greater good motivations (GG).

In fact, when grouping the activities according to the mode of musical engagement (performance or not), there is a small effect on the experience of GG, with performancebased musicians scoring lower. This evidences that this type of work may carry greater difficulty in building the perception of making a positive difference in the world and serving a greater purpose, when compared to teachers and composers.

When looking at the collaborative nature of the work, musicians working in groups tend to score lower across the three dimensions of MW. Most of the sub-sample of participants working in groups were orchestral musicians. These results echo previous qualitative reports with orchestras in the context of community engagement projects (Ascenso, 2016). Orchestra musicians have voiced how the traditional performance situation carries a strong gap "stage-audience" which translates into a difficulty to ascertain the impact of music in their listeners. This is also the same area of activity voicing a challenge with boredom and repetition (Steptoe, 1989; Ascenso et al., 2017) and perceived lack of autonomy and participation (Theorell, 1992; Parasuraman and Purohit, 2000; Breda & Kulesa, 1999) as well as highlighting the appeal of engagement in community music activities as means to enhance meaningfulness of work (Ascenso, 2017). There is evidence that work designed to promote positive impact on others leads to a greater perception of task significance and, therefore, meaningfulness. The same applies to work that enables the worker the opportunity to gain awareness of the wider benefits of their work (Grant, 2008; Michaelson et al., 2014). The increasing focus orchestras are placing on community engagement initiatives and social responsibility brings promise on this domain and can be a valuable tool to reinforce musicians' sense of meaningfulness. Most research with orchestra players tapping on psychosocial challenges of the work environment are considerably dated. It would be useful to assess this in light of the new dynamics that educational departments in orchestras are now offering.

Community engagement opportunities enable musicians to have a more direct contact with audiences and an enhanced perception of the role of music in society, along with offering opportunities for leadership, creativity and artistic input. These projects have been increasing in orchestras and crucially, have shifted their designation from "outreach" to "community engagement" precisely to highlight the mutual benefit to both participants and musicians. A common approach across the sector has been to create projects where the musician's role is framed as a "teaching artist" (Booth, 2009) bridging the gap between the performer identity and the teacher identity. This aspect is expected to be greater reflected in the GG sub-scale. It is interesting to note how this was the only dimension where soloists had comparable scores to orchestral players. Soloists' sense that their work matters (positive meaning) and that it helps them understand the world and contributes to personal growth (meaning-making through work) was, on the contrary, higher than orchestra players. Given that soloists are arguably less exposed to repetition (Steptoe, 1989) and have larger latitude for decision making in their repertoire choices, it is possible that this will translate into a greater sense of significance of their work. The gap audience-public and the difficulty of having a direct idea of the impact of their performances in people's life however, is arguably a shared experience with orchestras and could help explain the similar GG result.

On this point, the cultural diversity of our sample is also of note. We know that an interdependent view of the self (characteristic of Eastern cultures), equates the self as primarily interconnected with others. Higher interdependence may become more meaningful than pursuing personal goals (Markus & Kitayama, 1991). Prosocial values, for instance, are known to be more accessible in collectivistic cultures due to the emphasis on prioritizing the good of the group over the good of the individual (Douglass et al., 2016). When assessing greater good motivations with musicians, the possible impact is obvious. Contributing to a greater good beyond the self could be more valued by musicians from/working in a collectivist context in their evaluation of MW.

Overall, musicians' MW profile is encouraging: musicians draw high levels of meaning from their work and this is true across sex, age and across areas of activity.

#### 7.4.3 Meaning in life and meaningful work

The third aim of this study was to investigate the relationship between global and work-domain meaning for professional musicians (sub-question 4.6).

The link between musicians' MW and MIL matches previous findings (Allan et al., 2015; Steger et al., 2012) and, as expected, the two constructs are strongly correlated, highlighting how meaning in work may be a central element towards promoting general meaning in life for musicians.

Furthermore, the correlations between search for meaning in life and MW were only significant for the PM sub-scale and very small, to an almost negligible extent. The two are almost independent. This reinforces yet again how, for musicians, searching for meaning does not depend on the experience of meaning both globally (in life) and domain-related (in work). Interestingly, all music activities experience similar levels of search for meaning. We know there are, however, several domains people draw from in their search for meaning in life beyond work (Steger & Dik, 2010). It would be interesting to explore the place that work has when compared with other sources of meaning for musicians.

#### 7.4.4 Meaning and wellbeing and illbeing indicators

The fourth aim of this study was to clarify the relationship of global and workdomain meaning with wellbeing and illbeing indicators (life satisfaction (LS) and psychological distress) among musicians.

In line with previous research (e.g. Steger et al., 2006; Steger et al., 2009; Park et al., 2010), musicians' MIL and LS are moderately correlated, irrespective of age. This denotes the strong association of the constructs as well as their independence. There was an almost negligible negative correlation between *search for meaning* and LS, independently of age. This reinforces yet again how, for musicians, searching for meaning

is not necessarily counter-productive for wellbeing. Previous research has reported a positive association between search for meaning and life satisfaction among those who already experience considerable meaning in life (Park et al. 2010). As mentioned earlier, the result for search for meaning can have multiples interpretations and further qualitative inquiry would allow to unpack these. Overall, however, the lack of a negative association with key desirable outcomes such as LS is reassuring.

All sub-scales of MW were also moderately positively correlated with LS, echoing previous research (Douglass et al., 2016; Steger et al., 2010; Steger et al., 2012), and MW offers musicians a contribution towards life satisfaction, beyond the contribution of meaning in life, highlighting once more the importance of work for musicians' wellbeing.

The pattern of results on psychological distress were also aligned with previous research (e.g. Dunn & O'Brien, 2009; Steger, Mann, et al., 2009; Steger & Kashdan, 2007): musicians' sense of meaning in life and psychological distress are negatively moderately correlated. Crucially, this negative relationship between psychological distress and MIL was moderated by MW. This was evident for two of the WAMI subscales: PM and GG motivations, both following the same pattern: the higher the MW, the weaker the negative relationship between distress and life meaning. This echoes previous research, where a similar moderation effect was observed with close constructs: MW was found to moderate the relation between work stress and presence of meaning in life (Allan et al., 2016). The meaning musicians draw from work therefore, serves as a protective factor for the potential negative impact of illbeing on the presence of meaning in life. This is a very encouraging result, bringing yet again to attention the importance of investigating wellbeing and illbeing *together*. This result also reinforces the crucial role that working in music can carry for musicians already highlighted.

The *search for meaning* dimension has been positively associated with psychological distress in previous research (Li et al., 2019) as well as with affective disorders such as depression, which can be predicted by psychological distress (Steger et al. 2006; 2009). For musicians, however the association between psychological distress and search for meaning is extremely weak (.185). Once again our results indicate that an

increase in search for meaning is not necessarily experienced in the context of increased undesirable outcomes but possibly, for some musicians, as a positive experience.

#### 7.4.5 Comparisons with other performing arts

Finally, this study also aimed to place musicians in the broader performing arts context and explore potential differences in global-level and work-level meaning between musicians, dancers and actors (sub-question 4.8).

There were no differences between musicians' scores and those of dancers and actors for presence of MIL and search for meaning and on any of the dimensions of MW. The high levels of both global and work-domain meaning are similarly experienced across these three performing arts specialisms. We can conclude that not only does the professional engagement with music provide a space for strong meaning-making, this similarly extends to acting and dancing. This result steers us to unpack potential common features of performing arts work that can help explain this common trend. This remains hitherto unexplored empirically. The centrality of the work-identity for musicians' overall sense of self (Hargreaves et al., 2002) is of high importance in this context. Artists' work is extremely linked with self-expression and while some may see their work as a just a job, we have evidence that most do not (Ascenso, *in preparation*). As voiced in Ascenso et al. (2016) by a composer: "music is not my job, it is who I am, in my essence" (p.7). The overlap of MW profiles across the three performing arts investigated in our study may reflect this commonality. When evaluating MW with musicians in future research, it will be key to define what counts as "work" for musicians and other performing artists alike, and how much that work functions as an identity-affirming activity or not. The arts and crafts are mainly absent from mainstream wellbeing assessment (Delle Fave & Kocjan, 2016) and this includes meaning studies. A crucial step forward in this pursuit would be to validate the meaningful work measures with artistic populations. The WAMI was built and validated primarily with white-collar employees (Steger et al., 2012) and may carry assumptions that are biased by more traditional concepts of work.

#### 7.4.6 Limitations

Despite enabling answers to the questions it set out to address, this study is not without its limitations.

The first evident limitation emerges as a consequence of the study's crosssectional design. As most studies in meaning, it used survey answers collected at one point in time and relied on correlations, and therefore inferences on the direction of influence between variables is not possible. For example, the link between meaning in both life and work with LS was clear. However, as Steger and Dik (2009) highlight, it is possible that happy people tend to have more positive perceptions of MIL and better experiences in every life domain, including higher MW. Previous studies have confirmed this (e.g. Steger & Dik, 2010): those with higher wellbeing may be more likely to perceive their work as meaningful in the first place. Also, having MW seemed to help in finding MIL. However, it is also possible that people who experience higher global life meaning are more likely to experience higher meaning at a specific domain-level such as work.

Another area of limitation of the current study is that we aimed to understand meaning of a highly international sample through a Western-centred approach. Most of the knowledge on MIL and MW comes from research developed by North American and European scholars who in turn rely on Western theories of meaning. Several authors have argued for the need to be sensitive to cultural values (Fock et al., 2010; Steger, 2016; Zhou et al., 2012). As discussed, culture shapes key processes involved in the construction of one's sense of self, at the core of the experience of meaning-making. Meaningfulness is not experienced in a cultural vacuum and not taking into account the context in which the construction of meaning sits, necessarily limits the validity of our interpretation.

Besides the individual's cultural background, most meaning scholarship has also focused on white collar employees in industrialized cultures. It is reasonable to question the possible impact of cultural and social factors that are specific to the arts. The similarity in the global and domain-specific profiles of meaning that we found across the three performing arts reinforces this point. A cross-sectional design prevented us from having any information on the social and cultural values defining the arts domain that can affect perceptions of meaningfulness. For example, the centrality placed on developing embodied knowledge that characterizes the performing arts and the intricate connection between work and artists' identity construction (MacDonald, Hargreaves & Miell, 2002) deserve further attention.

Finally, we tried to understand musicians' experience of meaningfulness at work focusing only on work as a source for it. Rosso et al. (2010) warn against a rather simplistic view of MW research in which we look at only one source of meaning (e.g, the self, relationships, the work context, etc.). This can limit our capacity to reach a more thorough understanding of how musicians build meaning.

#### 7.4.7 Future research

Having looked at our study's limitations, in this final section, we discuss compelling areas of further meaning research with musicians. After addressing methodological considerations and the main avenues for investigation that our results point to, we consider the uniqueness of music as a profession and how this may inform further exploration on the topic of meaning.

First, how we assess work meaning with musicians must be considered. The WAMI was not built and validated with artistic professions in mind and, as mentioned, may carry assumptions that may be biased by more traditional concepts of work. One important aspect for instance is the difficulty in defining what counts as "work" for a musician when evaluating meaningfulness associated to music-making. Validating the scale for this particular group would be the first step towards a more rigorous assessment.

Furthermore, drawing from the limitations of cross-sectional assessment outlined above, future research would benefit from longitudinal designs and from qualitative inquiry. A few aspects are of particular interest. First, despite solid conclusions on the role of MW in contributing to MIL, the current study did not allow us to ascertain what aspects of their lives musicians are thinking about when they judge how meaningful their lives seem to them (global-meaning), in other words, musicians' *sources* for meaning. This study showed that musicians have a high sense of both MIL and MW and that there is a strong relationship between the two. However, musicians may draw from various sources of meaning in both general life and work, and the possibility that these sources may interact towards creating meaningfulness remains unexplored. For example, the desire for MW might be more easily satisfied in certain age groups by meaning experienced in other domains such as parenting, leisure, etc. (Steger & Dik, 2010). This echoes previous research suggesting that for work and life to be perceived as meaningful there is an integration from multiple sources or a balance (Baumeister, 1991; Chalofsky, 2003). Investigating a "web of meaning" (Rosso et al., 2010) in this way has the potential to build a richer understanding of MW in music.

Not only do we need to know more about musicians' sources for meaning, we are also interested in unpacking the *mechanisms* underlying meaning-making for musicians. Here, it will be particularly interesting to investigate mechanisms across art forms. Despite the similar pattern observed in meaning scores for musicians, dancers and actors, these results can potentially be built upon different mechanisms. Meaning research has focused on both self-oriented (e.g., authenticity, self-efficacy, self-esteem) and externally oriented (e.g., transcendence) explanatory mechanisms for meaning (Rosso et al., 2010). Exploring these with artists will bring much-needed clarification.

Furthermore, when considering mechanisms and sources of meaning for musicians, it will be valuable to also include a broad set of psychological processes. For example, research suggests that affect plays an important role in the experience of meaning (e.g. King et al., 2006). However, the scales used in this study focus on cognitive processes. Investigating the role of affect in musicians' meaningfulness would enhance our outlook on how meaning-making through music comes to be experienced. There are qualitative accounts from musicians on how concerts (framed as peak experiences) serve as sources for strong emotional experiences and build both individual and collective

meaning (Ascenso et al., 2017). And here, the link with high engagement and moments of optimal experience (flow) is also of interest.

Another important area that a longitudinal design would allow to investigate is potential generational cohort effects. This is particularly key given the changes that have been observed within the music sector (Williamson & Cloonan, 2016). For example, we are now more likely to find portfolio careers in younger generations of musicians. To add to the different experiences that different generations may be exposed to, previous research has pointed to generational differences in *values* that can have a direct impact on assessments of meaning. For example, Millennials value freedom and status more than previous generational values include work centrality (Twenge, et al., 2010). Other differences found across generational values include work centrality (Twenge, et al., 2010), extrinsic rewards (pay and status), social interactions (Twenge, et al., 2010), work-life balance (Sullivan et al., 2009; Twenge et al., 2010) and the weight of close relationships and shared values with co-workers (Weeks, 2019). A generational perspective seems therefore prudent for further meaning studies with musicians.

Besides opening new prospects on *how* to study (longitudinal and qualitative) and *what* to study (sources, mechanisms, different value systems), there is also room for expanding on *who* to study when looking at meaning and music. First, this research would largely benefit from greater inclusion of older musicians. Not only is it key to assess meaning and MW across the entire lifespan, retirees are progressively more represented in the population given the greater life expectancy. Costa (1998) argues that this is leading to a change in the dynamics of retirement, with frequent late work engagement. The context within which retire musicians experience their work may be different than that of other musicians (e.g. unique financial situations, life experiences, health, among other factors) and can offer valuable insight on MW and its relationship with global life meaning.

This study was intentional about focusing its assessment of MW on professional musicians. At the start of the project, it seemed obvious that evaluations about work would ideally be drawn by people who experience music as a professional occupation.

However, extending the evaluation of MW to music students may indeed be equally relevant. As Steger (2016) has pointed out, the seeds of MW may be sown quite early. This may be particularly the case in a music career. There is evidence that musicians feel called to music as a vocation from a very early age (Dobrow, 2011) and given the high level expertise required to start professional activity in music, there is typically an extensive period of training in music before the actual "job" can be started, where the student is already working.

One of the results of the current study that deserves future investigation is musicians' high level of search for meaning, while maintaining high presence of meaning. Previous research is conflicting, suggesting that the more meaning one perceives, the less the need to find further meaning (e.g. Crumbaugh, 1977; Melton & Schulenberg, 2008) while also suggesting that people can perceive their life as meaningful and also be searching for more meaning (Steger et al., 2012). Adding to the considerations already drawn on the potential role of culture on one's quest for meaning, further aspects remain to be clarified. For example, is meaning seeking always beneficial for musicians? Can there be several reasons behind the high search levels?

Another result worth investigating further is the pattern of lower MW for orchestral musicians when compared to other types of activity, despite maintaining high levels overall. Besides the need to assess the impact of community engagement projects on musicians' sense of MW already discussed (section 7.4.2), musicians' involvement with prosocial activities more broadly is also of interest for further research. People who volunteer and invest in prosocial behavior are more likely to see their work as meaningful (Rodell, 2013). It would be valuable to assess how musicians engage with promoting the common good, musically or otherwise.

Qualitative research has also revealed the role of mentoring on increasing one's sense of MW (Kennett & Lomas, 2015). Interestingly, mentoring has also been at the centre of innovative educational initiatives at major orchestras (Ascenso et al., 2019). Research on MW tends to focus on relationships to larger work communities or identities. However, not so much focus is given to connections to specific individuals. This is
particularly relevant in the music profession which relies heavily on one-to-one teaching (Perkins, 2013). Mentors have been found to have a strong impact on the meaning individuals make of their work in other domains (Kram, 1983; Ragins & Verbos, 2007). The influence of these typical dyadic interpersonal relationships in music training on the musicians sense of MW deserves investigation.

Additionally, as highlighted in the introduction of this chapter, there is strong evidence across other professional domains, that people are willing to earn less for jobs that mean more. This would be worth investigating further among musicians. A possible explanation if that meaningful work brings psychological benefits, and as such, it can reduce the importance of financial compensation for musicians when evaluating job options.

Finally, a crucial area for further research is the clarification on how MW may serve as a protective factor among musicians from the effect of negative stressors. As reviewed, previous research has highlighted how MW moderates the relationship between work stress and MIL, serving as a buffer (Allan et al., 2016). As Allan et al. (2016) point out, "one way people might cope with their work stress is to view their work as meaningful or serving some greater purpose" (p. 430). We obtained similar results when assessing psychological distress. It remains to be clarified if the same effect would be obtained for work stress. Interestingly, Steger and colleagues (2012) found that MW predicted lower depression but not lower stress. For anxiety and stress, higher MW only had a positive effect for participants who *simultaneously* scored high in job satisfaction (Allan et al., 2016). In other words, people need to view their work as both meaningful *and* satisfying to experience less anxiety and stress. Musicians have been associated with high job satisfaction (Vaag et al., 2015). It would be highly valuable to bring both variables together in further research.

In summary, musicians report high meaning in life (RQ 4.1), high search for meaning (RQ 4.2) and high meaningful work (RQ 4.4), and both are strongly linked (RQ 4.6). These high scores are observed across sex, age and type of music activity (RQ 4.3)

and 4.5) and are also comparable to indicators from other performing arts (RQ 4.8). Meaning in life is positively linked with desirable outcomes for musicians (life satisfaction) and negatively linked with undesirable outcomes (psychological distress) and crucially, MW acts as a protective factor for the negative impact of distress on musicians' life meaning (RQ 4.7).

# **PART III**

# 8. DISCUSSION AND CONCLUSION

### 8.1 Chapter overview

This thesis set out to investigate musicians' wellbeing though the lens of Positive Psychology. This chapter brings together the three studies carried out in that endeavour. In what follows, each study's findings are considered in relation to the overarching questions set out for this project in Chapter 4. Implications for both musicians' wellbeing research and promotion are drawn. We then address the overarching limitations of this work and propose areas for it to be developed further. The chapter ends with considerations on the thesis's contributions to knowledge.

## 8.2 The research questions

Chapters 1 and 2 outlined the theoretical bases for the construct of wellbeing. Aligned with the World Health Organization's constitution and rooted in two decades of research within Positive Psychology, we discussed how wellbeing means more than the absence of illbeing and integrates multiple components, covering both hedonic (feeling good) and eudaimonic (functioning well) dimensions. The construct of *positive mental health* encapsulates these dimensions. Assuming wellbeing is more than the absence of illbeing means that both wellbeing and illbeing are of importance for a complete profile. Hence, it also became clear that we needed to investigate musicians' profile of positive indicators of functioning *and* profile of illbeing, *together*. The *Dual continua model* (Keyes, 2002) was introduced, as it provides an integrative lens with a categorical classification system which has received strong empirical support. When looking at the existing research base with musicians (Chapter 3), it became clear that it did not yet do justice to the positive nature and multidimensionality of the wellbeing construct and that it seemed oblivious to mainstream wellbeing models. There appeared to be a substantial gap in the literature, as the so-called wellbeing studies were, for the most part, focused on illbeing. When analysing the few exceptions when Positive Psychology models have indeed been used in research among musicians, a stark figure deserved attention: the extremely high levels of meaning, calling for further clarification. This led to the emergence of four research questions for this thesis, as follows:

*RQ1:* What is the positive mental health profile of an international sample of professional and student musicians?

*RQ2:* What is the psychological distress profile of an international sample of professional and student musicians?

RQ3: Is musicians' profile of mental health and mental illness in accordance with the theoretical expectations laid out by the Dual continua model (Keyes, 2002)?

#### RQ4: Do musicians report high meaning in both global life and the work domain?

To answer these questions, three studies were conducted. Study 1 (Chapter 5) assessed musicians' positive mental health profile, observing patterns for demographic variables and for the different types of musical activity while also comparing musicians' scores with general population indicators and with other performing artists. Study 2 (Chapter 6) investigated musicians' illbeing profile, through the construct of psychological distress – a strong predictor of mental illness. Similarly, trends across demographic variables were explored as well as differences among the represented areas of musical activity. Musicians' scores were compared with published results from both occupational and student samples, as well as with indicators from other performing arts. These two profiles of wellbeing and illbeing then allowed to explore if the Dual continua model (Keyes, 2002) was confirmed among musicians. Finally, Study 3 (Chapter 7) addressed the gaps left from previous research applying Positive Psychology models with musicians, clarifying trends for *meaning in life* and *meaningful work*. As with the previous studies, demographic tendencies were explored and the different areas of activity in music compared. Musicians' scores were also placed in the context of indicators from other performing artists.

Each study contributed to the overall profile of musicians' wellbeing this thesis aimed to generate, focusing on different facets. While the results for each empirical study have been discussed in the study's dedicated chapter, this section provides an overarching discussion integrating the three studies and referring back to the overarching RQs outlined for this thesis.

#### 8.2.1 RQ1: Positive mental health

The first research question, guiding Study 1, focused on *positive mental health*. Results evidenced a very favourable profile for musicians. Crucially, musicians scored moderately or highly across all components of emotional, psychological and social wellbeing, denoting there is no striking imbalance needing attention. The demographic trends were broadly in line with previous research, with the exception of two goldstandard eudaimonic indicators of wellbeing: Personal growth and Purpose in life. Contrary to previous research showing a similar decline with age for both components (Clarke et al., 2000; Ryff, 1989, 1991, 2017; Springer et al., 2011), musicians showed very high scores very early on that remain high for all age groups across the life-span. Our results partially echo previous research in the sense that both scales tend to behave similarly in relation to age, but there seems to be an advantage for musicians in this regard. Personal growth stands as the closest component to Aristotle's original 'eudaimonia' (Ryff, 1989). Our data showed a striking result as the mode for the distribution was the maximum value of this sub-scale. Music-making may indeed provide a privileged space for experiencing a sense of continued development, of perceiving the self as expanding and of realizing one's potential, across all age groups. A similarly high result was found for *Social contribution* (the perception that one contributes with something valuable to society). Moreover, the high scores across both hedonic and eudaimonic components were transversal to all the types of musical activity included in the study.

Such favourable profile in key eudaimonic components is indeed very encouraging. As Ryff (2019a, 2018) points out, eudaimonic wellbeing is highly

consequential for general health as it is fundamentally anchored in how individuals negotiate their way through life challenges. Crucially, Ryff (2019a) has recently stressed how the arts and humanities may be uniquely placed to nurture eudaimonic wellbeing. Despite being modestly heritable (Kessler et al., 2004), eudaimonic wellbeing is largely shaped by the environment (as most psychological characteristics are). Pursuing excellence and virtue implies therefore agency towards knowing oneself and subsequently understanding how to fully realize one's potential (Ryff & Singer, 2008). There is a strong body of evidence already pointing to the role of arts engagement in this endeavour for general population samples as well as for vulnerable groups (Fancourt & Finn, 2019). Nonetheless, the predominantly negative profile of musicians drawn by previous research (Chapter 3) seemed to underline that these benefits of music-making are not at the centre of musicians' experience when music is pursued as a career. Our results suggest, however, that this previous body of research may be obscuring key benefits of a professional engagement with the arts. The close profile we found with other performing arts groups (dance and theatre) reinforces this point. Interestingly, also in line with this, a previous study reporting a 90% rate of high job satisfaction among musicians – a significantly higher rate in relation to other professions (clerical workers, human relations and industrial workers) (Kivimaki & Jokinen, 1994) – highlighted how music offered a forum for greater self-realization and perceived skill variety than other occupations.

Overall, Study 1's results can seem surprising in light of the extant literature on musicians' wellbeing (Chapter 3), as they challenge the somewhat embedded stereotype that musicians' wellbeing tends to be low and that the music profession's challenges necessarily translate into disadvantaged mental health profiles. Our results are a clear support to Seligman (1998)'s argument on the unbalanced tendency found in psychological research. Indeed, within Music Psychology and performing arts medicine we have similarly dedicated our attention primarily to disorder<sup>65</sup>. When wellbeing is

<sup>&</sup>lt;sup>65</sup> Interestingly, this is even apparent in the name of one of the key journals in the area: Medical *Problems* of Performing Artists.

assessed as the presence of positive indicators of functioning, musicians show encouraging profiles. Our results add to previous research in reinforcing this (Ascenso et a., 2018; 2017; Araujo et al., 2017).

As expected, hedonic and eudaimonic components of wellbeing were only moderately or weakly correlated. This reinforces again the need to include both hedonia and eudaimonia in our assessment of wellbeing among musicians (Ascenso et al., 2018). Measures based on emotions alone will likely fail to capture musicians' experience.

Perhaps the most encouraging result of Study 1 was the distribution across the diagnostic categories established by Keyes (2002). The proportion of musicians in the flourishing category was higher that what has been described for general population groups (Keyes, 2002) and crucially, a total of 79.1% of musicians in our sample reported favourable mental health (either moderate mental health or flourishing). Music seems indeed to provide opportunities for flourishing and musicians' *positive mental health* profile is markedly favourable.

#### 8.2.2 RQ 2: Mental illness

The second research question addressed in the first part of Study 2, emerged from the need to draw a profile of musicians' psychological illbeing, in order to integrate both positive and negative continua of functioning. The construct chosen was non-specific psychological distress (NPD), given its status as a strong predictor of clinically-significant mental illness.

The general profile of musicians' NPD, along with its mental illness prevalence estimate, was encouraging. The large majority (64.4%) presented no indicator of psychological distress in the past 30 days, and the 23.9% who scored high enough for moderate levels of NPD, were mostly borderline to no distress. Overall, 88.3% of the sample did not qualify for severe distress. The trends for demographic variables (sex and age) were in line with previous research (Drapeau et al., 2012) favouring women and older musicians. Levels of NPD were comparable across the different types of musical activity. When comparing professional musicians' scores with published indicators from other occupational groups, musicians scored lower than all groups considered (doctors, miners, nurses, army, and taxi drivers).

The profile was less encouraging for music students. Rates of NPD were either comparable or higher than other student samples. Music students' profiles seemed to be in line with that of medical students (e.g. Dendle et al., 2018; Bore et al., 2016). This pattern echoes previous research. vanFenema and vanGeel (2014) assessed psychopathology using the *Symptom Questionnaire* (SQ48; Carlier et al., 2012) with a small group of conservatoire and medical students (n=76) and observed that both groups experienced more psychopathological symptoms than the general population, with no significant differences when comparing the two groups with one another. This result in conjunction with a greater percentage of students in the languishing category when compared with professionals (Figure 5.22 - Study 1), also in line with previous findings (Ryff & Keyes, 1995), calls our attention to the need for a greater investment in the development of wellbeing promotion and illbeing prevention in conservatoire settings.

Overall, our results encourage us to take extra caution when making assertions about musicians' mental illness. The prevalence of severe and moderate mental illness does not align with the alarming profile drawn in previous research and does not parallel the rates being reported for performance anxiety across the sector. As discussed (section 3.3), considering MPA akin to mental disorder is theoretical and empirically inaccurate and hinders our understanding of musicians' experience. MPA does not always equate with mental illness—high psychological distress does. The profile of psychological distress drawn from this study is not unfavourable to musicians. Musicians do not seem to be at higher risk for mental illness than other groups and music students' risk tends to be comparable to other demanding programmes. Musicians' scores are also comparable to those of other performing artists.

#### 8.2.3 RQ 3: The Dual continua model

After obtaining a profile of musicians' wellbeing *and* illbeing we were in a position of investigating how the two relate. The second part of Study 2 was led by RQ3 aimed to ascertain whether the *Dual continua model* of mental health (Keyes, 2002) validly represents musicians' experience.

When placing psychological distress and positive mental health *together*, there were only weak to moderate negative correlations, denoting that these are not opposites of each other. Importantly, of the small group of musicians reporting levels of psychological distress high enough to qualify for severe mental illness, 36% were *simultaneously* experiencing either flourishing or moderate mental health, validating the *Dual continua model*. Our results confirm empirically that mental health and mental illness are not opposite ends of a single continuum and instead represent distinct but related continua. The absence of mental illness does not necessarily equate to the presence of mental health and vice-versa.

Overall, our results suggest that musicians' profile of psychological illbeing is generally not worse than what is found for other groups, and in the case of professionals it is indeed better. And crucially, mental illness and mental health can co-exist, which calls for extra care in the rather simplistic approach of negative labelling that has permeated research with musicians on this domain. Gratuitous pathologizing and victimization (e.g. Gross & Musgrave, 2020) are a disservice to musicians, besides not making justice to the constructs being discussed. The negative narrative around musicians' mental health is so pervasive that it can even be permeating musicians' construction of identity, as has been highlighted in previous research (Ascenso et al., 2017). Musicians who are well report seeing themselves as not 'typical musicians' and seem to have a perception that wellbeing is rare in the sector. Our results contradict this: the large majority of musicians are indeed psychologically well.

#### 8.2.4 RQ 4: Meaning in life and meaningful work

Study 3 built upon a recent profile of musicians' wellbeing that after assessing hedonic and eudaimonic components through the lens of the PERMA model (see section 2.4.3.2) found an extremely high score for *meaning* (Ascenso et al., 2018). Despite very insightful, this result didn't allow to conclude if musicians were reporting high global meaning in life, in work, or both. RQ4 steered this clarification.

Our results showed that musicians scored high in *both* global *presence of meaning* in life and *meaningful work*. Musicians also scored high for *search for meaning*. Interestingly, musicians' *presence of meaning* was almost independent of their *search for meaning*. In other words, despite finding meaning, musicians continue to actively pursue it and show comfort with questioning and change. Additionally, *search for meaning* seems to be experienced positively by musicians as is clear from the lack of a positive association with psychological distress and a lack of a negative association with life satisfaction. Overall, musicians' meaning in life scores were very encouraging.

Similarly, musicians scored highly on *meaningful work* (MW). This echoed previous qualitative reports accounting for a sense of meaningfulness through music-making among professional musicians (Ascenso et al., 2017), as well as a strong sense of calling towards music, defined as a consuming meaningful passion (Dobrow, 2013).

Despite good levels of MW across the sample, some musical activities seem to enable more meaningfulness than others. When comparing the different groups, we found that orchestra and ensemble musicians scored lower than other groups. Orchestral musicians have been associated with specific challenges such as low artistic integrity and participation, social tensions, poor work environment and boredom, with high job involvement appearing as a key factor to mitigate the negative impact of tensions and poor environment on musicians' level of satisfaction and distress (Parasuraman & Purohit, 2000). The struggle around artistic participation can arguably make this group more prone to question the meaningfulness of their work. This deserves attention in further research. There is evidence from other areas of professional activity that workers who are able to provide creative input have better health profiles (Mirowsky & Ross, 2007) and that the opportunity of expressing oneself and one's values through work is a clear predictor of MW (May, et al., 2004; Scroggins, 2008). As argued, in the last four decades, organizational cultures in orchestras have changed, with the increase of outreach schemes and concurrent chamber music seasons being likely to improve musicians' experience of artistic contribution. Recent qualitative accounts with London-based orchestras seem to reinforce this (Ascenso, 2016).

A key result of Study 3 was the protective role of MW against the negative impact of psychological distress on life meaning for musicians. This brings to light yet again the importance of studying negative and positive components of functioning *together*.

In summary, across the three empirical studies, we find that musicians' profiles of wellbeing, through the lens of Positive Psychology, are very good, both in hedonic as well as in eudaimonic facets. Musicians' profile of illbeing is not worse than other professional groups and the music profession seems to be providing a fruitful space for meaningful work.

### 8.3 Implications

The work presented in this thesis carries a number of implications for wellbeing research and promotion with musicians. This section outlines the most prominent of these.

#### 8.3.1 Investigating wellbeing as being well

First, the review from Chapter 3 along with the results of this thesis steer us to consider if we have indeed been asking the right questions when researching musicians' wellbeing. Conclusions on *well* being can only be drawn if optimal functioning is what is assessed. Indeed, studies on musicians' wellbeing have tended to assess illbeing. As

Ascenso et al. (2018) point out, "if the formulations for wellbeing as *more than the absence of disorder*-shared by the WHO and largely expanded by Positive Psychologyare to be taken seriously, wellbeing assessment necessarily translates into measuring positive components of functioning alongside negative ones" (p. 9). These represent different phenomena (Keyes, 2005) as was clear from the results of Studies 1 and 2, calling for conceptual rigour in our pursuit towards building a robust body of research in the area of musicians' wellbeing. As mentioned in Chapter 3, studies assessing performance anxiety inaccurately being presented as profiles of psychological wellbeing, miss both the positive nature of the wellbeing construct and its multidimensionality. Measures of disorder do not allow for conclusions on wellbeing, and measures of affect alone will also fail to grasp the richness of musicians' experience of wellbeing, as is evident from the centrality of eudaimonic components emerging from our data, such as personal growth and meaningfulness at work.

Furthermore, our results encourage us to take extra caution when making assertions about musicians' mental illness. As was evident from Study 2, the prevalence of psychological distress, a robust predictor of mental illness, does not seem to correspond to the alarming prevalence rates being reported for performance anxiety across the sector. As discussed (section 3.3), the pathologizing narrative permeating our research base tends to equate MPA with mental disorder which is inaccurate. Our results encourage us to have greater care in the use of these labels.

The need for assessing wellbeing positively and multidimensionally is intertwined with yet another issue permeating musicians' wellbeing research: the apparent theoretical vacuum and conceptual blurriness around the construct. As discussed in Chapter 3, there seems to be an assumption that the music sector shares a common understanding of what is meant by wellbeing. However, definitions in research outputs are generally lacking or dissonant with the assessment measures used. We suggest therefore, that wellbeing be operationalised as optimal functioning and assessed as such, and that researchers take care to ensure a clear conceptualization, rooted in theoretical frameworks. This will optimise communication and comparison of findings, helping build a solid and rigorous research base.

#### 8.3.2 Thinking about wellbeing and illbeing together

Besides the call for doing justice to the wellbeing construct along with rigour in the use of terms, our results highlight how being well as a musician is different from not being ill and, conversely, how high and moderate psychological distress can co-occur with flourishing. This stresses the need for musicians' wellbeing and illbeing to be studied *together*, integrated in a holistic approach. There is a tendency for a binary, and rather simplistic, view of mental health (i.e. one is either healthy or not). As discussed in Chapter 2, people often refer to a mental disorder as having 'it', while the disorder is dynamic, not a fixed entity (Maddux, 2009; Widiger & Samuel, 2005). This reification dismisses individual subjectivity and the flexible nature of functioning. This is accompanied by the tendency to poll individuals in a discrete, often isolated, set of symptoms, and labelling them accordingly. As is clear from the results of this thesis, mental health is a complex and multidimensional construct and is best understood both as the presence of positive indicators in relation to the absence of illbeing. Our results come as an encouragement to the Music Psychology community not only to invest in integrating multiple dimensions of positive functioning when investigating and promoting wellbeing with musicians, but crucially, to resist labelling musicians according to their shortcomings. Our results and the empirical support for Keyes's (2002) model reinforce how mental health/illness status should not be established by one dimension alone. This broader outlook brings a richer perspective about musicians' functioning and provides new avenues for overcoming the challenges of the profession.

#### 8.3.3 Promoting wellbeing well

The implications outlined above also intertwine with the way we promote wellbeing across the sector. How we define wellbeing is reflected in our decisions about initiatives with musicians and in our criteria to assess their efficacy. If wellbeing concerns optimal functioning, nourishing musicians' wellbeing will necessarily translate into much more than just minimizing harm or training coping strategies. We will not achieve promotion of mental health through only promoting reduction of illness. This means developing promotion activities that are not merely reactive but proactive in both protecting and enhancing flourishing; in targeting the mentally unhealthy who are not mentally ill (languishing); as well as helping manage mental illness. At an institutional level, this calls for a *modus operandi* in which it is seen as equally important to create opportunities for musicians' flourishing as it is to reduce the risk of injury or the prevalence of performance anxiety. For example, through optimizing the experience of positive emotions, of connecting with one's identity, of pursuing virtue and personal growth, of finding meaningfulness at work and developing social wellbeing.

Positive Psychology Interventions (PPIS) offer great potential in this pursuit. These are initiatives aiming to promote flourishing of individuals and groups (Parks & Biswas-Diener, 2013; Parks & Schuller, 2014). PPIs are highly varied and target behavioural, emotional and cognitive facets such as awareness and use of one's strengths, optimism, gratitude, kindness, forgiveness, empathy and goal-setting (see Parks & Layous, 2016 for an overview). Some interventions have been based on the wellbeing models reviewed in Chapter 2. For instance, the *Well-Being Therapy* focuses on the promotion of the six dimensions of Ryff's model of psychological wellbeing (Fava, 1999) and *Positive Psychotherapy* was built upon PERMA components (Seligman et al., 2006).

There is now good evidence testifying to the efficacy of PPIs in promoting both hedonic and eudaimonic dimensions of wellbeing, alongside their effect in ameliorating negative aspects of functioning such as depression as well as preventing relapse. The change they enable is sustainable and their ease of implementation, cost-effectiveness and efficacy with other groups (Bolier et al., 2013; Parks & Biswas-Diener, 2013; Sin & Lyubomirsky, 2009) shows promise for their application among musicians.

Another implication of this shift in outlook, is that *everyone* is eligible to enhance one's wellbeing, not just musicians who are struggling. Similarly, besides dedicated

initiatives by wellbeing practitioners, anyone can be an agent of change and the pursuit of enhancing flourishing in the music sector can be embedded across all types of settings and activities. For example, Patston & Waters (2015) have suggested practical ways through which flourishing can be promoted in a music studio teaching context. These include positive priming (beginning lessons in a positive and affirming way), strengths spotting (helping student become aware of their strengths and fostering their deployment during their music practice), pausing to reflect on the positives (stopping to notice something positive worth praising rather than just stopping when there is a mistake) and process praise (praising effort and development rather than just final outcomes).

Finally, wellbeing is not neutral and individuals and communities develop a shared understanding of what is good and desirable as a result of their characteristics (Huta & Waterman, 2014). Musicians' wellbeing needs to be understood as it relates to the specificities of the sector and the idiosyncratic dynamics within both music education and professional settings. Multidimensional models of wellbeing such as those reviewed in this thesis are crucial in this pursuit, as they provide a guiding lens and enable to unpack, for example, how different music specialisms, genres and contexts of music-making may experience distinct barriers to different elements of flourishing or how musicians engaged in the same type of activity may derive very different wellbeing outcomes from it.

In conclusion, musicians show a very promising profile of wellbeing, when it is assessed as the *presence* of positive indicators of functioning, scoring particularly high on key eudaimonic components such as *personal growth* and *purpose in life*. Musicians' profile of mental illness, as measured by a robust indicator (NPD), is also overall favourable, and comparable to other groups, with the exception of the student population who seems to struggle the most. Finally, musicians score high in both meaning in life and meaningful work, and the high meaning they derive from their work serves as a protector against the negative influence of distress. Despite decades of research highlighting the profession's stresses and strains, the pursuit of a music career offers musicians opportunities for flourishing. As we continue to further our understanding of how to enable a healthy music sector, Positive Psychology brings an innovative and valuable approach. As a fairly recent area, it will also greatly benefit from the encounter with the specificities and richness of the artistic community, and the understanding of musicians' flourishing will bring valuable insight to the field. We look forward to the continuation of this fruitful encounter.

### 8.4 Limitations of this work

Chapters 5, 6 and 7 have addressed specific limitations of each of the three empirical studies. In this section, we address limitations of the overall project.

Firstly, there is a survival bias permeating this thesis, as highlighted in Study 2. Our participants were indeed highly engaged in the music sector. Despite including music agencies and a wide variety of online musician forums in recruitment that could represent less stable professional situations, our participants made it in the industry and were integrated in the sector either academically, professionally, or both. Unemployment and precarity are therefore not included. This would be particularly important to address, especially given the specific psychosocial risks for artists that it may bring (Duarte, 2020). There is also a group of musicians who dropped out of the sector altogether. If that change was to any extent a consequence of an inability to cope with the demands of the sector, this is a group of high interest for wellbeing research that deserves special attention in further studies.

Secondly, part of the inherent limitations of a cross-sectional design already mentioned, is that this approach only allowed the exploration of relationships between correlates, hindering important investigations. For example, it prevented us from discerning if the age effects we found reflect effects of cumulative advantage, cohort differences or both. Naturally, this design is inadequate for drawing conclusions on within-person change across the life span which are indeed of high interest.

Another limitation of this thesis is the categorization of participants. Although it is useful to assess tendencies across types of musical activity, particularly given the wide variety of behavioural routines and preparation they may entail, classifying musicians can be rather spurious. The profession is changing and a portfolio of activities and even specialisms are now more likely to represent a musician's typical week (Bartleet et al., 2020). The professional/student categorization may also be simplistic. Contrary to what happens with most university degrees, music students may start working in their field of expertise long before graduating. Furthermore, it is also difficult to define from which point someone is considered a professional musician. For other occupational populations, we find commonly-understood criteria. In music, there is no formal external accreditation that can guarantee the professional status for a musician. Indeed the boundaries are hard to establish and it is not uncommon to find self-employed musicians who were self-taught. Our sampling strategy targeted the most recognized professional avenues for recruitment: orchestras, opera houses, conservatoires, music agents. It is, however, reasonable to assume that there is a group of musicians who escape the mainstream professional and academic networks in music. This also limits further research attempts that may want to draw a representative sample of the musician population. Even on a national level, this is challenging as 1) there is no agreed-upon definition for "musician", nor certifications or professional accreditation requirement to work in the industry and 2) there is no single organization/union representing all musicians like we find in other professions.

Furthermore, we cannot claim a truly international profile. The research presented in this thesis may risk reflecting a bias towards westernized cultures and developed nations. Not only did we use standardized measures validated in Western countries, our sample was a primarily of Western origin and working within Western classical music. Even with a high number of nationalities represented, the large majority of participants were either from Europe or North America. Despite the wide reach of the survey across countries and the systematic approach to recruitment, the sampling was also restricted to the English language, limiting yet again the study's representativeness. Finally, this thesis was centred on a post-positivist epistemology and yielded only quantitative data. The survey-based procedure was deemed appropriate as the aim was to draw a profile of quantifiable indicators across the variables of interest. However, this approach limits our understanding by leaving out the grasp of musicians' subjective experiences, in context. Future research making use of qualitative and mixed-methods designs will enable to unpack the meanings behind the means we have obtained.

### 8.5 Areas for future research

The results of this thesis point to several avenues for further research.

First, research among student musicians emerges as a priority. Of particular interest are both the groups of students classifying for severe distress as well as those in the languishing category. In our attempts to further our understanding of wellbeing with this population, the multidimensional approach to wellbeing will be key. It will be crucial to assess if there are certain components of wellbeing contributing to a languishing categorization more than others, as well as to ascertain in-person trajectories of wellbeing and illbeing along with subjective experience. In our initiatives to promote wellbeing in conservatoires, both illbeing prevention *and* flourishing enhancement need to be priority. One of the areas receiving significant attention in this pursuit has been the promotion of use of personal strengths.

#### 8.5.1 Strengths in action

Character strengths are "ways of thinking, feeling, and behaving that facilitate exceptional performance and are both energizing and motivating when used" (Young et al., 2015, p.17; Linley et al., 2010; Peterson & Seligman, 2004). Building character strengths has been central in Positive Psychology's agenda (Peterson & Park, 2009) and there is extensive evidence on the association between strengths use and sustained optimized functioning for both physical and psychological domains. This has been noticeable in academic contexts, through *Positive Education*, a new area aimed at

combining education for traditional skills with education for wellbeing, through the promotion of strengths (Seligman et al., 2009). Positive outcomes have included greater self-efficacy, group cohesion and relatedness, need satisfaction, positive emotion, engagement, curiosity, love of learning and creativity alongside higher achievement (e.g. Minhas, 2010; Proctor et al., 2011; Seligman et al., 2005, 2009). There is also compelling evidence on the impact of identifying and using one's strengths at work, including higher achievement of goals, satisfaction, meaning and reduction of work-related stress (Linley et al., 2010; Peterson et al., 2010; van Woerkom & Meyers, 2015). The investigation of strengths use in both the conservatoire and professional settings in the music sector is therefore of high interest as we continue to integrate Positive Psychology in our understanding of musicians' wellbeing.

As well as paying more attention to conditions and processes that contribute to musicians' flourishing at an *individual* level, Positive Psychology also encourages us to consider the promotion of wellbeing in *groups and communities* (Seligman & Csikszentmihalyi, 2000). It is worth applying a positive lens and analyzing whether musicians are being offered opportunities to flourish and whether the goals set in both academic and professional settings are contributing to fulfillment or hindering it. Is the music sector mainly representing risk or opportunities for wellbeing?

#### 8.5.2 Towards a flourishing 'creative industry'

In a sector where career progress depends largely on evaluative judgements through competitions, auditions and appraisals of performances, one is left to question if the so-called 'creative industry' is allowing its agents to be creative or prioritizing conformity. In the Western classical music sector there may be deeply engrained cultural norms influencing musicians' wellbeing that deserve attention. The debate around artistic participation, integrity and freedom highlights this. As reviewed in Chapter 3, it has been suggested that the sector can often be characterised by artistic impositions, alongside excessive scrutiny (Sternbach, 1995; Raeburn et al., 2003). The challenge of maintaining personal expressiveness while subjected to extreme repetition has also been

evidenced (Ascenso et al., 2017) as well as the challenge of boredom in orchestras (Parasuraman & Purohit, 2000) and of maintaining a balance between perceived artistic autonomy and having to fulfil others' artistic choices (Oakland et al., 2014). Indeed, musicians can be placed in highly constrained workplaces where they have minimal creative input (Baumol & Bowen, 1968).

The pervasiveness of high scrutiny in the sector has recently been addressed by Leech-Wilkinson (2020), who, after a thorough analysis of record reviews, argued that creativity in performance tends to be policed by music critics and the sector seems to be reinforcing a homogenised approach to music-making. The response to performer individuality and interpretative autonomy is often disciplinary or, at best, dismissive. Differences in interpretative choices seem to be unwelcome, as evidenced by the use of consistent negative labels whenever a performance falls outside the 'norm'. Crucially, the tyranny of debilitating imposition of conformity through comparison and competition has also been voiced by music students as a barrier for wellbeing (Perkins et al., 2017). This topic may be particularly key for the classical music sector, whereas jazz musicians have documented perceiving performance as a space of opportunity for self-expression, creativity and autonomy (Dobson, 2010).

It is striking if musicians do not find an optimal space for creativity and expression through music, arguably one of the reasons they might have chosen the profession in the first place (Bennett, 2016). Despite musicians maintaining good levels of flourishing overall, and deriving high meaning from their work as was evident in this thesis, the specific dynamic of the workplace as a facilitator of optimal opportunities for flourishing may need attention. This extends to students as well. Calling for the integration of improvisation in the conservatoire curriculum, Smilde (2016) highlights how this element, usually absent in typical conservatoire training, can facilitate connection with self and others and provide a space for personal expression. Research into learning cultures in conservatoires identified cultures of hierarchy, recommending that more spaces for 'safe' non-hierarchical risk-taking are integrated into the ways that professional musicians are educated (Perkins, 2013). Indeed, further study will continue to enable to understand how to best create opportunities for musicians to flourish both in professional and academic settings. A phenomenological approach seems ideal in this pursuit.

Another central area for further development in the attempt to advance our knowledge of mental health in the music sector is the inclusion of culture-sensitive methods of assessment. The conceptual framework that musicians use to make a judgement about each of the components we assessed may indeed be influenced by their culture of upbringing, their present cultural framework and their occupational culture. Despite assessing nationality and country of work, we were not able to include these variables in the analysis due to highly uneven sample sizes. Even so, national differences are not equivalent to cultural differences and the scales used are self-report measures originally built and validated in Western contexts, possibly reflecting a bias towards them. Kitayama and Park (2010) have highlighted how cultural tasks reflect cultural values and active, sustained engagement in these tasks lays the ground for the construction of self and identity.

For example, as mentioned in Study 3 (Chapter 7), it has been argued that compared with individualist cultures, life evaluations of adults from collectivist cultures are more driven by interpersonal concerns, and levels of subjective wellbeing tend to be lower in collectivist countries (Diener & Suh, 2000a). The role of age in wellbeing has also been evidenced to vary by culture (Karasawa et al., 2011). Oishi and Schimmack (2010) stressed the need to address the complexities of cultural differences in wellbeing concepts, measurement, and correlates. A more robust understanding of musicians' wellbeing and informed policies on the matter will necessarily build upon a nuanced identification of culturally-relevant short-term and longer-term sources and trajectories of wellbeing.

#### 8.5.3 The meaning of meaning

The existing research within musicians' sense of meaning also deserves attention. We found that professional musicians score high in meaningful work. We also know that music students endorse a calling orientation which also encapsulates meaningfulness through work and is linked with greater life satisfaction (Dobrow, 2006). However, having a calling and *living* it are different realities. Are musicians allowed to fully live their calling? Berg et al. (2010) have drawn attention to a strategy to enhance one's living of a calling orientation to work. *Job expanding* implies incorporating meaningful elements either by (1) engaging in short-term, temporary tasks or through (2) adding new tasks to a job altogether. Workers are proactive in designing (or redesigning) both tasks and relational aspects of their jobs, enhancing the meaning of their work (Leana et al., 2009; Lyons, 2008; Wrzesniewski & Dutton, 2001). Studies on *job crafting* place emphasis on this process of optimizing how the job meets one's values, abilities and goals (Berg et al., 2010). This strategy has emerged in previous studies with musicians. For example, large ensemble musicians have voiced how they 'feel part of a herd', depleted of opportunities for personal expression, which leads to an active search for additional musical tasks, as a compensation (e.g. maintaining parallel smaller ensembles and using work breaks to express themselves musically in other forms) (Ascenso et al., 2017).

The unanswered calling phenomenon may also explain differences in meaningfulness within the musicians' group. If an individual has, for example, been forced to embrace a type of musical activity for which they don't feel particularly called (e.g. a concert pianist employed as an accompanist), it is reasonable to assume their evaluation of their work's personal significance would be lower. This area would benefit from further attention.

Another area deserving investigation in further research is the protective role of meaningful work. In line with Allan et al. (2016), we found that MW helps musicians cope with psychological distress. It remains to be clarified if the same effect could be experienced for key challenges such as work stress and MPA.

Another important variable to consider in future research is physical health. Meaning increases with age (Steger et al., 2006). At the same time, health status tends to decline with age (National Institute of Aging, 2011). Furthermore, musicians report high rates of work-related injuries. There is evidence of a negative association between musculoskeletal symptoms and the experience of purpose in life (Hedberg et al., 2010). Given the centrality of injury risk in the music profession, and the high levels of meaning, both global and work-related, it will be valuable to clarify if meaningfulness of work has a protective effect on perceptions of physical health for musicians and if it can act a predictor of health-promoting behaviours.

Finally, it is also worth investigating if meaningful work can bring negative consequences. For example, Bunderson and Thomson (2009) drew attention to what they called the 'double-edged sword of deeply meaningful work' through qualitative inquiry with a sample of zoo-keepers. They found that while zookeepers with a sense of calling had a strong identification with their work and found it meaningful, they were also more likely to view their work as a moral duty and to sacrifice salary, personal time, and comfort for work's sake.

In summary, this thesis opens a variety of avenues for further research. Besides the specific suggestions given on each study's dedicated chapter, we suggest three overarching areas of development: 1) the application of a multidimensional framework of wellbeing to further the understanding of student musicians' experience; 2) a closer analysis of the music sector in the light of the indicators of flourishing, ascertaining ways to promote their optimisation along with a culturally-sensitive approach and 3) a refined understanding of the meaning of high meaning at work among musicians.

## 8.6 Contributions to knowledge

This thesis generated new insights into musicians' wellbeing through the integration of Positive Psychology's innovative framework to a cross-sectional assessment of an international sample of musicians. It provided the first profile of *positive mental health* among musicians, while also demonstrating the validity of the *Dual continua model* of mental health for this group. It challenged the negatively-oriented narrative around musicians' wellbeing permeating the research base, through providing a large-scale profile of indicators of clinically-significant mental illness with musicians.

Finally, it expanded on previous research, clarifying musicians' experience of a high sense of meaning in life and in work.

This work encourages us to complement our growing knowledge of musicians' challenges and strains with the elements of what constitutes wellbeing, both individually and collectively. Music-making at a professional level can indeed be a *well* of *being well*. In our pursuit towards a mentally healthy sector, the hope is that our research and intervention efforts will increasingly reflect this balance.

## REFERENCES

- Abbott, R. A., Ploubidis, G. B., Huppert, F. A., Kuh, D., Wadsworth, M. E., & Croudace, T. J. (2006). Psychometric evaluation and predictive validity of Ryff's psychological well-being items in a UK birth cohort sample of women. *Health and Quality of Life Outcomes*, 4(1), 76.
- Abréu-Ramos, A. M., & Micheo, W. F. (2007). Lifetime prevalence of upper-body musculoskeletal problems in a professional-level symphony orchestra: Age, gender, and instrument-specific results. *Medical Problems of Performing Artists*, 22(3), 97–104.
- Ackermann, B., Driscoll, T., & Kenny, D. T. (2012). Musculoskeletal pain and injury in professional orchestral musicians in Australia. *Medical Problems of Performing Artists*, 27(4), 181–187.
- Ackermann, B. J., & Adams, R. D. (2004). Perceptions of causes of performance-related injuries by music health experts and injured violinists. *Perceptual and Motor Skills*, 99(2), 669–678.
- Ackermann, B. J., Kenny, D. T., O'Brien, I., & Driscoll, T. R. (2014). Sound Practice— Improving occupational health and safety for professional orchestral musicians in Australia. *Frontiers in Psychology*, 5: 973.
- Adams, S. H., Knopf, D. K., & Park, M. J. (2014). Prevalence and treatment of mental health and substance use problems in the early emerging adult years in the United States:
  Findings from the 2010 National Survey on Drug Use and Health. *Emerging Adulthood*, 2(3), 163–172.
- Adler, N. E., Boyce, T., Chesney, M. A., Cohen, S., Folkman, S., Kahn, R. L., & Syme, S. L. (1994). Socioeconomic status and health: The challenge of the gradient. *American Psychologist*, 49(1), 15–24.

- Affleck, G., & Tennen, H. (1996). Construing benefits from adversity: Adaptational significance and dispositional underpinnings. *Journal of Personality*, 64(4), 899– 922.
- Akiskal, H. S., & Akiskal, K. (1988). Reassessing the prevalence of bipolar disorders: Clinical significance and artistic creativity. *Psychiatry and Psychobiology*, 3(S1), 29s–36s.
- Akiskal, H. S., & Akiskal, K. K. (2007). In search of Aristotle: Temperament, human nature, melancholia, creativity and eminence. *Journal of Affective Disorders*, 100(1–3), 1–6.
- Akiskal, K. K., Savino, M., & Akiskal, H. S. (2005). Temperament profiles in physicians, lawyers, managers, industrialists, architects, journalists, and artists: A study in psychiatric outpatients. *Journal of Affective Disorders*, 85(1), 201–206.
- Aksoydan, E., & Camci, N. (2009). Prevalence of orthorexia nervosa among Turkish performance artists. *Eating and Weight Disorders Studies on Anorexia, Bulimia and Obesity*, 14(1), 33–37.
- Albertsen, K., Nielsen, M. L., & Borg, V. (2001). The Danish psychosocial work environment and symptoms of stress: The main, mediating and moderating role of sense of coherence. *Work & Stress*, *15*(3), 241–253.
- Allan, B. A., Autin, K. L., & Duffy, R. D. (2014). Examining social class and work meaning within the psychology of working framework. *Journal of Career Assessment*, 22(4), 543–561.
- Allan, B. A., Douglass, R. P., Duffy, R. D., & McCarty, R. J. (2016). Meaningful work as a moderator of the relation between work stress and meaning in life. *Journal of Career Assessment*, *24*(3), 429–440.
- Allan, B. A., Duffy, R. D., & Douglass, R. (2015). Meaning in life and work: A developmental perspective. *The Journal of Positive Psychology*, *10*(4), 323–331.

Allport, G. W. (1961). Pattern and growth in personality. Holt, Reinhart & Winston.

- Altenmüller, E. (2003). Focal dystonia: Advances in brain imaging and understanding of fine motor control in musicians. *Hand Clinics*, *19*(3), 523–538, xi.
- Altenmüller, E., Ioannou, C. I., & Lee, A. (2015). Apollo's curse: Neurological causes of motor impairments in musicians. In E. Altenmüller, S. Finger, & F. Boller (Eds.), *Progress in Brain Research* (Vol. 217, pp. 89–106). Elsevier.
- Altenmüller, E., & Jabusch, H.-C. (2010). Focal dystonia in musicians: Phenomenology, pathophysiology, triggering factors, and treatment. *Medical Problems of Performing Artists*, *25*(1), 3–9.
- Amadio, P. C. (2003). Management of nerve compression syndrome in musicians. *Hand Clinics*, 19(2), 279–286.
- Amaral-Corrêa, L., Teixeira dos Santos, L., Nogueira Paranhos, E. N., Minetti Albertini, A.
   I., do Carmo Silva Parreira, P., & Calazans Nogueira, L. A. (2018). Prevalence and risk factors for musculoskeletal pain in keyboard musicians: A systematic review.
   *PM&R*, *10*(9), 942–950.
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders (4th ed)*. American Psychiatric Association.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders: DSM-5* (5th ed). American Psychiatric Publishing, Inc.
- Andreasen, N. C. (1987). Creativity and mental illness: Prevalence rates in writers and their first-degree relatives. *The American Journal of Psychiatry*, 144(10), 1288–1292.
- Andrews, B., & Wilding, J. M. (2004). The relation of depression and anxiety to life-stress and achievement in students. *British Journal of Psychology*, 95(Pt 4), 509–521.
- Andrews, G., Issakidis, C., & Carter, G. (2001). Shortfall in mental health service utilisation. *The British Journal of Psychiatry*, *179*(5), 417–425.

- Andrews, G., & Slade, T. (2001). Interpreting scores on the Kessler Psychological Distress Scale (K10). *Australian and New Zealand Journal of Public Health*, *25*(6), 494–497.
- Ang, R. P., & Jiaquing, O. (2012). Association between caregiving, meaning in life, and life satisfaction beyond 50 in an Asian sample: Age as a moderator. *Social Indicators Research*, 108(3), 525–534.
- Angner, E. (2009). Subjective measures of well-being: Philosophical perspectives. In D.
   Ross & H. Kincaid (Eds.), *The Oxford Handbook of Philosophy of Economics* (pp. 560-579). Oxford: Oxford University Press.
- Antonini Philippe, R., Kosirnik, C., Vuichoud, N., Williamon, A., & von Roten, F. C. (2019). Understanding wellbeing among college music students and amateur musicians in western Switzerland. *Frontiers in Psychology*, *10*, 820.
- Antonovsky, A. (1993). The structure and properties of the Sense of Coherence scale. *Social Science & Medicine*, *36*(6), 725–733.
- Aranda, M. P., Castaneda, I., Lee, P.-J., & Sobel, E. (2001). Stress, social support, and coping as predictors of depressive symptoms: Gender differences among Mexican Americans. *Social Work Research*, 25(1), 37–48.
- Araújo, L. S., Wasley, D., Perkins, R., Atkins, L., Redding, E., Ginsborg, J., & Williamon, A. (2017). Fit to Perform: An investigation of higher education music students' perceptions, attitudes, and behaviors toward health. *Frontiers in Psychology*, 8: 1558.
- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, *55*(5), 469–480.
- Arnett, J. J. (2014). Presidential address: The emergence of emerging adulthood: A personal history. *Emerging Adulthood*, *2*(3), 155–162.

- Arnold, K. A., Turner, N., Barling, J., Kelloway, E. K., & McKee, M. C. (2007). Transformational leadership and psychological well-being: The mediating role of meaningful work. *Journal of Occupational Health Psychology*, 12(3), 193–203.
- Arrindell, W. A., Meeuwesen, L., & Huyse, F. J. (1991). The Satisfaction with Life Scale (SWLS): Psychometric properties in a non-psychiatric medical outpatients sample. *Personality and Individual Differences*, *12*(2), 117–123.
- Arrindell, W., Heesink, J. A. M., & Feij, J. (1999). The Satisfaction with Life Scale (SWLS): Appraisal with 1700 health young adults in The Netherlands. *Personality and Individual Differences*, 26, 815–826.
- Ascenso, S. (2016). *Finding Meaning in Music—Research report*. London Music Masters.
- Ascenso, S., McCormick, J., & Perkins, R. (2019). Leadership in the Transition from Music
   Student to Professional Musician: The Civic Orchestra of Chicago Fellowship. In J.
   Rowley., D. Bennett., & P. Schmidt (Eds.). *Leadership of Pedagogy and Curriculum in Higher Music Education*. Routledge.
- Ascenso, S., Medeiros-Mirra, R. & Williamon, A. (*in preparation*). Professional musicians' work-orientation through the *Job, Career, Calling* framework.
- Ascenso, S., Perkins, R., & Williamon, A. (2018). Resounding meaning: A PERMA wellbeing profile of classical musicians. *Frontiers in Psychology*, *9*, 1895.
- Ascenso, S., Williamon, A., & Perkins, R. (2017). Understanding the wellbeing of professional musicians through the lens of Positive Psychology. *Psychology of Music*, 45(1), 65–81.
- Aschengrau, A., & Seage, G. R. (2020). *Essentials of epidemiology in public health* (Fourth edition). Jones & Bartlett Learning.
- Ashcraft, M. H., & Faust, M. W. (1994). Mathematics anxiety and mental arithmetic performance: An exploratory investigation. *Cognition & Emotion*, *8*(2), 97–125.

- Atienza, F. L., Balaguer, I., & Corte-Real, N. (2016). Factorial invariance of the Satisfaction with Life Scale in adolescents from Spain and Portugal. *Psicothema*, *28.3*, 353–358.
- Australian Bureau of Statistics (ABS). (2006). *National health survey: Summary of results, Australia, 2004–05 (cat. No. 4364.0)*. Canberra: ABS.
- Australian Bureau of Statistics (ABS). (2018). *Mental Health*. ABS. Retrieved from https://www.abs.gov.au/statistics/health/health-conditions-and-risks/mental-health/latest-release#psychological-distress
- Baadjou, V. A. E., Roussel, N. A., Verbunt, J. A. M. C. F., Smeets, R. J. E. M., & de Bie, R. A. (2016). Systematic review: Risk factors for musculoskeletal disorders in musicians. *Occupational Medicine*, 66(8), 614–622.
- BACP. (2017). *Sector overview, university and college counselling services*. British Association for Counselling and Psychotherapy.
- Baggaley, R. F., Ganaba, R., Filippi, V., Kere, M., Marshall, T., Sombié, I., Storeng, K. T., & Patel, V. (2007). Detecting depression after pregnancy: The validity of the K10 and K6 in Burkina Faso. *Tropical Medicine & International Health: TM & IH*, *12*(10), 1225–1229.
- Bagozzi, R. P., Wong, N., & Yi, Y. (1999). The role of culture and gender in the relationship between positive and negative affect. *Cognition and Emotion*, *13*(6), 641–672.
- Bailey, C., Madden, A., Alfes, K., Shantz, A., & Soane, E. (2017). The mismanaged soul: Existential labor and the erosion of meaningful work. *Human Resource Management Review*, 27(3), 416–430.
- Baillie, A. J. (2005). Predictive gender and education bias in Kessler's psychological distress Scale (k10). Social Psychiatry and Psychiatric Epidemiology, 40(9), 743– 748.

- Bair, M., Wu, J., Damush, T., Sutherland, J., & Kroenke, K. (2008). Association of depression and anxiety alone and in combination with chronic musculoskeletal pain in primary care patients. *Psychosomatic Medicine*, *70*, 890–897.
- Bakker, A. B. (2005). Flow among music teachers and their students: The crossover of peak experiences, Journal of Vocational Behavior, *66*(1), 26-44.
- Bandelow, B., & Michaelis, S. (2015). Epidemiology of anxiety disorders in the 21st century. *Dialogues in Clinical Neuroscience*, *17*(3), 327–335.
- Barbar, A. E. M., de Souza Crippa, J. A., & de Lima Osório, F. (2014). Performance anxiety in Brazilian musicians: Prevalence and association with psychopathology indicators. *Journal of Affective Disorders*, *152–154*, 381–386.
- Bardo, A. R. (2017). A life course model for a domains-of-life approach to happiness: Evidence from the United States. *Advances in Life Course Research*, *33*, 11–22.
- Bartleet, B., Bennett, D., Bridgstock, R., Harrison, S., Draper, P., Tomlinson, V., & Ballico, C. (2020). Making music work: Sustainable portfolio careers for Australian musicians. Australia Research Council Linkage Report. *Brisbane: Queensland Conservatorium Research Centre, Griffith University.*
- Barton, R., Killian, C., Bushee, M., Callen, J., Cupp, T., Ochs, B., Sharp, M., & Tetrault, K. (2008). Occupational performance issues and predictors of dysfunction in college instrumentalists. *Medical Problems of Performing Artists*, 23(2), 72–78.
- Bass, B., & Riggio, R. (2006). Transformational leadership. Lawrence Erlbaum.
- Batz-Barbarich, C., Tay, L., Kuykendall, L., & Cheung, H. K. (2018). A meta-analysis of gender differences in subjective well-being: Estimating effect sizes and associations with gender inequality. *Psychological Science*, 29(9), 1491–1503.
- Bauer, J. M., Levin, V., Munoz Boudet, A. M., Nie, P., & Sousa-Poza, A. (2017). Subjective well-being across the lifespan in Europe and Central Asia. *Journal of Population Ageing*, 10(2), 125–158.

- Bauer, J., & Park, S. (2010). Growth isn't just for the young: Growth narratives, eudaimonic resilience, and the aging self. In P. Frye & C. Keyes (Eds.), *Frontiers of resilient aging* (pp. 60–89). Cambridge University Press.
- Baumeister, R. F. (1991). Meanings of life. Guilford Press.
- Baumol, W. J., & Bowen, W.G. (1968). *Performing arts, the economic dilemma: A study of problems common to theater, opera, music and dance*. M.I.T. Press.
- Beasley, T.M. and Schumacker, R.E. (1995) Multiple regression approach to analyzing contingency tables: Post hoc and planned comparison procedures. *The Journal of Experimental Education*, 64, 79-93.
- Beaumont, S. L. (2009). Identity processing and personal wisdom: An informationoriented identity style predicts self-actualization and self-transcendence. *Identity: An International Journal of Theory and Research*, 9(2), 95–115.
- Beauregard, N., Marchand, A., & Blanc, M.-E. (2011). What do we know about the nonwork determinants of workers' mental health? A systematic review of longitudinal studies. *BMC Public Health*, *11*, 439.
- Beck, A. T., & Steer, R. A. (1993). *BAI: Beck Anxiety Inventory Manual*. New York: Psychological Corporation.
- Beckers, H. J., van Kooten-Noordzij, M. A., de Crom, R. M., Schouten, J. S., & Webers, C. A. (2016). Visual complaints and eye problems in orchestral musicians. *Medical Problems of Performing Artists*, *31*(3), 140–144. h
- Bejjani, F. J., Kaye, G. M., & Benham, M. (1996). Musculoskeletal and neuromuscular conditions of instrumental musicians. *Archives of Physical Medicine and Rehabilitation*, 77(4), 406–413.
- Bellah, R. N., Madsen, R., Sullivan, W. M., Swidler, A. & Tipton, S. M. (1996). Habits of the heart: Individualism and commitment in American life. University of California Press.

- Bendassolli, P. F., & Borges-Andrade, J. E. (2015). Meaning, meaningfulness, and tensions in artistic work. *Revista Psicologia Organizações e Trabalho*, *15*(1), 71–81.
- Bennett, D. (2016). *Understanding the classical music profession: The past, the present and strategies for the future*. Aldershot: Ashgate Publishing Limited.
- Benzeval, M., & Judge, K. (2001). Income and health: The time dimension. *Social Science & Medicine (1982)*, *52*(9), 1371–1390.
- Berg, J. M., Grant, A. M., & Johnson, V. (2010). When callings are calling: Crafting work and leisure in pursuit of unanswered occupational callings. *Organization Science*, *21*(5), 973–994.
- Beuningen, J. V. (2012). *The Satisfaction With Life Scale: Examining construct validity*. Statistics Netherlands.
- Bewick, B. M., Trusler, K., Mulhern, B., Barkham, M., & Hill, A. J. (2008). The feasibility and effectiveness of a web-based personalised feedback and social norms alcohol intervention in UK university students: A randomised control trial. *Addictive Behaviors*, 33(9), 1192–1198.
- Bijl, R. V., de Graaf, R., Hiripi, E., Kessler, R. C., Kohn, R., Offord, D. R., Ustun, T. B., Vicente,
  B., Vollebergh, W. A. M., Walters, E. E., & Wittchen, H.-U. (2003). The prevalence of
  treated and untreated mental disorders in five countries. *Health Affairs*, 22(3),
  122–133.
- Bijl, R. V., Ravelli, A., & van Zessen, G. (1998). Prevalence of psychiatric disorder in the general population: Results of the Netherlands Mental Health Survey and Incidence Study (NEMESIS). *Social Psychiatry and Psychiatric Epidemiology*, 33(12), 587–595.
- Bird, H. A. (2013). Overuse syndrome in musicians. *Clinical Rheumatology*, *32*(4), 475–479.

- Biswas-Diener, R., Kashdan, T. B., & King, L. A. (2009). Two traditions of happiness research, not two distinct types of happiness. *The Journal of Positive Psychology*, 4(3), 208–211.
- Biswas-Diener, R., Vittersø, J., & Diener, E. (2009). Most people are pretty happy, but there is cultural variation: The Inughuit, the Amish, and the Maasai. In E. Diener (Ed.), *Culture and Well-Being* (Vol. 38, pp. 245–260). Springer Netherlands.
- Blackie, H., Stone, R., & Tiernan, A. (1999). An investigation of injury prevention among university piano students. *Medical Problems of Performing Artists*, *14*(3), 141–149.
- Blais, M. R., Vallerand, R. J., Pelletier, L. G., & Brière, N. M. (1989). L'échelle de satisfaction de vie: Validation canadienne-française du "Satisfaction with Life Scale." [The satisfaction scale: Canadian-French validation of the Satisfaction with Life Scale.]. *Canadian Journal of Behavioural Science / Revue Canadienne Des Sciences Du Comportement*, 21(2), 210–223.
- Blanchflower, D. G., & Oswald, A. J. (2008). Is well-being U-shaped over the life cycle? *Social Science & Medicine (1982), 66*(8), 1733–1749.
- Blustein, D. (2006). *The psychology of working: A new perspective for career development, counseling, and public policy*. Lawrence Erlbaum Associates.
- Blustein, D. (2011). A relational theory of working. *Journal of Vocational Behavior*, 79, 1–17.
- Bolier, L., Haverman, M., Westerhof, G. J., Riper, H., Smit, F., & Bohlmeijer, E. (2013). Positive psychology interventions: A meta-analysis of randomized controlled studies. *BMC Public Health*, 13(1), 119.
- Bond, F., & Bunce, D. (2004). The role of acceptance and job control in mental health, job satisfaction, and work performance. *The Journal of Applied Psychology*, *88*, 1057–1067.

- Bore, M., Kelly, B., & Nair, B. (2016). Potential predictors of psychological distress and well-being in medical students: A cross-sectional pilot study. *Advances in Medical Education and Practice*, 7, 125-135.
- Both-Nwabuwe, J. M. C., Dijkstra, M. T. M., & Beersma, B. (2017). Sweeping the floor or putting a man on the moon: How to define and measure meaningful work. *Frontiers in Psychology*, *8*, 1658.
- Bourbonnais, R., Brisson, C., Malenfant, R., & Vézina, M. (2005). Health care restructuring, work environment, and health of nurses. *American Journal of Industrial Medicine*, 47(1), 54–64.
- Bower, R. (2017). *Psychometric evaluation of the Mental Health Continuum-Short Form* (*MHC-SF*) with adolescents living in the west of Scotland. Unpublished doctoral dissertation. University of Glasgow.
- Boyraz, G., Lightsey, O. R., & Can, A. (2013). The turkish version of the Meaning in Life Questionnaire: Assessing the measurement invariance across turkish and american adult samples. *Journal of Personality Assessment*, *95*(4), 423–431.
- Bradburn, N., & Caplovitz, D. (1965). *Reports on happiness. A pilot study of behavior related to mental health*. Aldine Publishing Company.
- Bradburn, N. M. (1969). The structure of psychological well-being. Aldine.
- Braden, A. M., Osborne, M. S., & Wilson, S. J. (2015). Psychological intervention reduces self-reported performance anxiety in high school music students. *Frontiers in Psychology*, 6: 195.
- Bragge, P., Bialocerkowski, A., & McMeeken, J. (2006). A systematic review of prevalence and risk factors associated with playing-related musculoskeletal disorders in pianists. *Occupational Medicine*, *56*(1), 28–38.
- Brandfonbrener, A. (2003). Musculoskeletal problems of instrumental musicians. *Hand Clinics*, *19*(2), 231–239.

- Brandfonbrener, A. G. (2006). Special issues in the medical assessment of musicians. *Physical Medicine and Rehabilitation Clinics*, *17*(4), 747–753.
- Brandheim, S., Rantakeisu, U., & Starrin, B. (2013). BMI and psychological distress in 68000 Swedish adults: A weak association when controlling for an age-gender combination. *BMC Public Health*, 13(1), 68.
- Brandstätter, M., Baumann, U., Borasio, G. D., & Fegg, M. J. (2012). Systematic review of meaning in life assessment instruments. *Psycho-Oncology*, *21*(10), 1034–1052.
- Braun, D. L., Sunday, S. R., & Halmi, K. A. (1994). Psychiatric comorbidity in patients with eating disorders. *Psychological Medicine*, *24*(4), 859–867.
- Braveman, P. A., Cubbin, C., Egerter, S., Chideya, S., Marchi, K. S., Metzler, M., & Posner, S. (2005). Socioeconomic status in health research: One size does not fit all. *JAMA*, 294(22), 2879–2888.
- Breda, J., & Kulesa, P. (1999). *Stress and job satisfaction among symphony musicians*. Research Studies 2, Symphony Orchestra Institute.
- Brief, A. P., & Nord, W. R. (1990). Work and meaning: Definitions and interpretations. In
  A. P. Brief & W. R. Nord (Eds.). *Meanings of occupational work: A collection of essays*(pp. 1–19). Lexington Books/D. C. Heath and Com.
- Brodsky, W. (1996). Music performance anxiety reconceptualized. *Medical Problems of Performing Artists*, *11*(1), 88–98.
- Brugha, T., Bebbington, P., Singleton, N., Meltzer, D., Lewis, G., Jenkins, R., Farrell, M., Bhugra, D., Lee, A., & Meltzer, H. (2004). Trends in service utilisation and treatment for mental disorders in adults thoughout Great Britain. *British Journal* of Psychiatry, 185, 378–384.
- Brugués, A. O. (2011). Music performance anxiety—Part 1. A review of its epidemiology. *Medical Problems of Performing Artists*, *26*(2), 102–105.
- Brunes, A., Augestad, L. B., & Gudmundsdottir, S. L. (2013). Personality, physical activity, and symptoms of anxiety and depression: The HUNT study. *Social Psychiatry and Psychiatric Epidemiology*, 48(5), 745–756.
- Budd, J. W. (2011). The thought of work. Cornell University Press.
- Buller, J. (2012). What is it like to be an injured musician? *Canadian Music Educator*, 43(4), 20–23.
- Bültmann, U., Kant, I., Kasl, S. V., Beurskens, A. J. H. M., & van den Brandt, P. A. (2002).
   Fatigue and psychological distress in the working population: Psychometrics, prevalence, and correlates. *Journal of Psychosomatic Research*, *52*(6), 445–452.
- Bunderson, J. S., & Thompson, J. A. (2009). The call of the wild: Zookeepers, callings, and the double-edged sword of deeply meaningful work. *Administrative Science Quarterly*, *54*(1), 32–57.
- Burkholder, K. R., Brandfonbrener, A. G. (2004). Performance-related injuries among student musicians at a specialty clinic. *Medical Problems of Performing Artists*, 19(3), 116–122.
- Burns, R. A., & Machin, M. A. (2009). Investigating the structural validity of Ryff's psychological well-being scales across two samples. *Social Indicators Research*, 93(2), 359–375.
- Butkovic, A., & Dopudj, D. R. (2017). Personality traits and alcohol consumption of classical and heavy metal musicians. *Psychology of Music*, *45*(2), 246–256.
- Butkovic, A., Ullén, F., & Mosing, M. A. (2015). Personality related traits as predictors of music practice: Underlying environmental and genetic influences. *Personality and Individual Differences*, 74, 133–138.
- Butković, A., Vukojević, N., & Carević, S. (2021). Music performance anxiety and perfectionism in Croatian musicians. *Psychology of Music*, Online first: January 2021.

- Butler, J., and Kern, M. L. (2016). The PERMA-Profiler: a brief multidimensional measure of flourishing. *International Journal of Wellbeing*, 6, 1–48.
- Buttsworth, L. M., & Smith, G. A. (1995). Personality of Australian performing musicians by gender and by instrument. *Personality and Individual Differences*, *18*(5), 595– 603.
- Byrne, C., MacDonald, R., and Carlton, L. (2003). Assessing creativity in musical compositions: flow as an assessment tool. British Journal of Music Education, 20, 277–290.
- Cairney, J., & Krause, N. (2005). The social distribution of psychological distress and depression in older adults. *Journal of Aging and Health*, *17*(6), 807–835.
- Cairney, J., Veldhuizen, S., Wade, T. J., Kurdyak, P., & Streiner, D. L. (2007). Evaluation of 2 measures of psychological distress as screeners for depression in the general population. *The Canadian Journal of Psychiatry*, *52*(2), 111–120.
- Cambor, C. G., Lisowitz, G. M., & Miller, M. D. (1962). Creative jazz musicians: A clinical study. *Psychiatry*, *25*(1), 1–15.
- Campbell, A. (1976). Subjective measures of well-being. *The American Psychologist*, *31*(2), 117–124.
- Cannuscio, C. C., Colditz, G. A., Rimm, E. B., Berkman, L. F., Jones, C. P., & Kawachi, I. (2004). Employment status, social ties, and caregivers' mental health. *Social Science & Medicine (1982)*, *58*(7), 1247–1256.
- Cantor, N., & Blanton, H. (1996). Effortful pursuit of personal goals in daily life. In P. Gollwitzer & J. Bargh (Eds.), *In The psychology of action: Linking cognition and motivation to behavior* (pp. 338–359). Guilford.
- Cantril, H. (1965). The pattern of human concerns. Rutgers University Press.

- Capone, V., & Petrillo, G. (2020). Mental health in teachers: Relationships with job satisfaction, efficacy beliefs, burnout and depression. *Current Psychology*, *39*(5), 1757-1766.
- Carlier, I., Schulte-Van Maaren, Y., Wardenaar, K., Giltay, E., Van Noorden, M., Vergeer, P.,
  & Zitman, F. (2012). Development and validation of the 48-item Symptom Questionnaire (SQ-48) in patients with depressive, anxiety and somatoform disorders. *Psychiatry Research*, 200(2–3), 904–910.
- Caron, J., & Liu, A. (2010). A descriptive study of the prevalence of psychological distress and mental disorders in the Canadian population: Comparison between lowincome and non-low-income populations. *Chronic Diseases in Canada*, *30*(3), 84– 94.
- Caron, J., & Liu, A. (2011). Factors associated with psychological distress in the Canadian population: A comparison of low-income and non low-income sub-groups. *Community Mental Health Journal*, *47*(3), 318–330.
- Carstensen, L. L., Turan, B., Scheibe, S., Ram, N., Ersner-Hershfield, H., Samanez-Larkin, G.
  R., Brooks, K. P., & Nesselroade, J. R. (2011). Emotional experience improves with age: Evidence based on over 10 years of experience sampling. *Psychology and Aging*, *26*(1), 21–33.
- Cascio, W. F. (2003). Changes in workers, work, and organizations. In W. C. Borman, D. R. Ilgen, & R. J. Klimoski (Eds.), *Handbook of psychology: Industrial and organizational psychology*, Vol. 12, (pp. 401–422). John Wiley & Sons Inc.
- Cena, H., Barthels, F., Cuzzolaro, M., Bratman, S., Brytek-Matera, A., Dunn, T., Varga, M., Missbach, B., & Donini, L. M. (2019). Definition and diagnostic criteria for orthorexia nervosa: A narrative review of the literature. *Eating and Weight Disorders: EWD*, 24(2), 209–246.

- Cennamo, L., & Gardner, D. (2008). Generational differences in work values, outcomes and person-organisation values fit. *Journal of Managerial Psychology*, 23(8), 891– 906.
- Chalofsky, N. (2003). An emerging construct for meaningful work. *Human Resource Development International*, 6(1), 69–83.
- Chan, C., Driscoll, T., & Ackermann, B. J. (2014). Effect of a musicians' exercise intervention on performance-related musculoskeletal disorders. *Medical Problems of Performing Artists*, 29(4), 181–188.
- Charness, M. E. (1992). Unique upper extremity disorders of musicians. In L. Millender,
  D. Louis, & B. Simons (Eds.), *Occupation disorders of the upper extremity* (pp. 227–228). Churchill Livingstone.
- Chasin, M. (Ed.). (2008). *Hearing loss in musicians: Prevention & management*. Plural Publishing.
- Cheng, T. C., Powdthavee, N., & Oswald, A. J. (2015). Longitudinal evidence for a midlife nadir in human well-being: Results from four data sets. *The Economic Journal*, *127*(599), 126–142.
- Chittleborough, C. R., Winefield, H., Gill, T. K., Koster, C., & Taylor, A. W. (2011). Age differences in associations between psychological distress and chronic conditions. *International Journal of Public Health*, *56*(1), 71–80.
- Choden, T., Gu, Y., Guynh, S., Hoenig, J., & Norman, C. (2018). *Serious psychological distress among adults in New York City, 2002-2015*. Epi Data Brief (102). City Department of Health and Mental Hygiene.
- Cizek, E., Kelly, P., Kress, K., & Mattfeldt-Beman, M. (2016). Factors affecting healthful eating among touring popular musicians and singers. *Medical Problems of Performing Artists*, *31*(2), 63-68.

- Clark, L. A., Watson, D., & Mineka, S. (1994). Temperament, personality, and the mood and anxiety disorders. *Journal of Abnormal Psychology*, *103*(1), 103–116.
- Clarke, P. J., Marshall, V. W., Ryff, C. D., & Rosenthal, C. J. (2000). Well-being in Canadian seniors: Findings from the Canadian study of health and aging. *Canadian Journal on Aging / La Revue Canadienne Du Vieillissement*, 19(2), 139–159.
- Clarke, P. J., Marshall, V. W., Ryff, C. D., & Wheaton, B. (2001). Measuring psychological well-being in the Canadian study of health and aging. *International Psychogeriatrics*, *13*(S1), 79–90.
- Clausen, T., & Borg, V. (2011). Job demands, job resources and meaning at work. *Journal of Managerial Psychology*, *26*(8), 665–681.
- Cleary, P. D., & Mechanic, D. (1983). Sex differences in psychological distress among married people. *Journal of Health and Social Behavior*, *24*(2), 111–121.
- Cohen, K., & Cairns, D. (2012). Is searching for meaning in life associated with reduced subjective well-being? Confirmation and possible moderators. *Journal of Happiness Studies*, *13*(2), 313–331.
- Cohen, S., Janicki-Deverts, D., Chen, E., & Matthews, K. A. (2010). Childhood socioeconomic status and adult health. *Annals of the New York Academy of Sciences*, *1186*(1), 37–55.
- Colpe, L. J., Epstein, J. F., Barker, P. R., & Gfroerer, J. C. (2009). Screening for serious mental illness in the National Survey on Drug Use and Health (NSDUH). *Annals of Epidemiology*, *19*(3), 210–211.
- Compton, W. C., Smith, M. L., Cornish, K. A., & Qualls, D. L. (1996). Factor structure of mental health measures. *Journal of Personality and Social Psychology*, 71(2), 406– 413.
- Connor, K. M., Davidson, J. R., Churchill, L. E., Sherwood, A., Foa, E., & Weisler, R. H. (2000). Psychometric properties of the Social Phobia Inventory (SPIN). New self-rating

scale. The British Journal of Psychiatry: The Journal of Mental Science, 176, 379–386.

- Considine, R., Tynan, R., James, C., Wiggers, J., Lewin, T., Inder, K., Perkins, D., Handley, T., & Kelly, B. (2017). The contribution of individual, social and work characteristics to employee mental health in a coal mining industry population. *PLOS ONE*, *12*(1), e0168445.
- Cooper, C. L., & Wills, G. I. D. (1989). Popular musicians under pressure. *Psychology of Music*, *17*(1), 22–36.
- Corrigall, K., Schellenberg, E., & Misura, N. (2013). Music training, cognition, and personality. *Frontiers in Psychology*, *4*, 222.
- Corrigan, P. (2004). How stigma interferes with mental health care. *The American Psychologist*, *59*(7), 614–625.
- Costa, D. L. (1998). The evolution of retirement: Summary of a research project. *The American Economic Review*, *88*(2), 232–236.
- Costa, P. T., & McCrae, R. R. (1992). The five-factor model of personality and its relevance to personality disorders. *Journal of Personality Disorders*, *6*(4), 343–359.
- Costello, S. J. (2019). *Applied logotherapy: Viktor Frankl's philosophical psychology*. Cambridge Scholars Publishing.
- Cox, W. J., and Kenardy, J. (1993). Performance anxiety, social phobia, and setting effects in instrumental music students. *Journal of Anxiety Disorders*, 7, 49–60.
- Craske, M. G., & Craig, K. D. (1984). Musical performance anxiety: The three-systems model and self-efficacy theory. *Behaviour Research and Therapy*, *22*(3), 267–280.
- Creed, P. A., Muller, J., & Patton, W. (2003). Leaving high school: The influence and consequences for psychological well-being and career-related confidence. *Journal of Adolescence*, *26*(3), 295–311.

- Črnivec, R. (2004). Assessment of health risks in musicians of the Slovene Philharmonic Orchestra, Ljubljana, Slovenia. *Medical Problems of Performing Artists*, *19*(3), 140– 145.
- Crotty, M. (1998). The foundations of social research: Meaning and Perspective in the Research Process. Sage.
- Crumbaugh, J. C. (1977). The seeking of noetic goals test (SONG): A complementary scale to the purpose in life test (PIL). *Journal of Clinical Psychology*, *33*(3), 900–907.
- Csikszentmihalyi, M. (1975). Beyond boredom and anxiety. San Francisco, CA: Jossey-Bass.
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal performance.* New York, NY: Harper and Row.
- Csikszentmihalyi, M. (1997). *Finding flow: The psychology of engagement with everyday life.* New York, NY: HarperCollins BasicBooks.
- Csikszentmihalyi, M. (2014). *Applications of flow in human development and education.* Claremont: Springer.
- Cuijpers, P., Smits, N., Donker, T., ten Have, M., & de Graaf, R. (2009). Screening for mood and anxiety disorders with the five-item, the three-item, and the two-item Mental Health Inventory. *Psychiatry Research*, *168*(3), 250–255.
- Czekierda, K., Banik, A., Park, C. L., & Luszczynska, A. (2017). Meaning in life and physical health: Systematic review and meta-analysis. *Health Psychology Review*, *11*(4), 387–418.
- Davidson, S., Wadley, G., Reavley, N., Gunn, J., & Fletcher, S. (2018). Psychological distress and unmet mental health needs among urban taxi drivers: A cross-sectional survey. *Australian & New Zealand Journal of Psychiatry*, *52*(5), 473–482.
- Davies, J., & Mangion, S. (2002). Predictors of pain and other musculoskeletal symptoms among professional instrumental musicians: Elucidating specific effects. *Medical Problems of Performing Artists*, *17*, 155–168.

- de Bruin, G. P., & du Plessis, G. A. (2015). Bifactor analysis of the Mental Health Continuum—Short Form (MHC—SF). *Psychological Reports*, *116*(2), 438–446.
- de Carvalho, J. S., Pereira, N. S., Pinto, A. M., & Marôco, J. (2016). Psychometric properties of the Mental Health Continuum-Short Form: A study of Portuguese speaking children/youths. *Journal of Child and Family Studies*, *25*(7), 2141–2154.
- de Jonge, J., Mulder, M. J., & Nijhuis, F. J. (1999). The incorporation of different demand concepts in the job demand-control model: Effects on health care professionals. *Social Science & Medicine (1982)*, *48*(9), 1149–1160.
- Deasy, C., Coughlan, B., Pironom, J., Jourdan, D., & Mannix-McNamara, P. (2014). Psychological distress and coping amongst higher education students: A mixed method enquiry. *PLoS ONE*, 9(12), e115193.
- Deci, E. L., & Ryan, R. M. (Eds.). (2002). *Handbook of self-determination research*. University of Rochester Press.
- Deci, E. L., Ryan, R. M., Gagné, M., Leone, D. R., Usunov, J., & Kornazheva, B. P. (2001). Need satisfaction, motivation, and well-being in the work organizations of a former Eastern bloc country: A cross-cultural study of self-determination. *Personality and Social Psychology Bulletin*, 27(8), 930–942.
- Dempsey, E. (2015). *Music performance anxiety in children and teenagers: Effects of perfectionism, self-efficacy, and gender.* Unpublished Dissertation, University of Ottawa.
- Dendle, C., Baulch, J., Pellicano, R., Hay, M., Lichtwark, I., Ayoub, S., Clarke, D. M., Morand,
  E. F., Kumar, A., Leech, M., & Horne, K. (2018). Medical student psychological distress and academic performance. *Medical Teacher*, 40(12), 1257–1263.
- Dersh, J., Gatchel, R. J., Polatin, P., & Mayer, T. (2002). Prevalence of psychiatric disorders in patients with chronic work-related musculoskeletal pain disability. *Journal of Occupational and Environmental Medicine*, 44(5), 459–468.

- Devereux, J. J., Vlachonikolis, I. G., & Buckle, P. W. (2002). Epidemiological study to investigate potential interaction between physical and psychosocial factors at work that may increase the risk of symptoms of musculoskeletal disorder of the neck and upper limb. *Occupational and Environmental Medicine*, *59*(4), 269–277.
- Diaz, F. M. (2018). Relationships among meditation, perfectionism, mindfulness, and performance anxiety among collegiate music students. *Journal of Research in Music Education*, 66(2), 150–167.
- Diener, E. (1984). Subjective well-being. Psychological Bulletin, 95(3), 542–575.
- Diener, E. (2000). Subjective well-being: The science of happiness and a proposal for a national index. *American Psychologist*, *55*(1), 34–43.
- Diener, E. (2006). Understanding scores on the Satisfaction with Life Scale. Retrieved from https://commondatastorage.googleapis.com/eddiener/uploads/support/file/10 /Understanding\_SWLS\_Scores.pdf
- Diener, E. (2009). Positive Psychology: Past, present, and future. In S. Lopez & C. R. Snyder, *The Oxford Handbook of Positive Psychology* (pp. 7-11). Oxford: Oxford University Press.
- Diener, E. & Diener, C. (1996). Most people are happy. *Psychological Science*, *7*(3), 181–185.
- Diener, E., & Diener, M. (1995). Cross-cultural correlates of life satisfaction and selfesteem. *Journal of Personality and Social Psychology*, *68*(4), 653–663.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction With Life Scale. *Journal of Personality Assessment*, 49(1), 71–75.
- Diener, E., & Lucas, R. E. (2000). Explaining differences in societal levels of happiness: Relative standards, need fulfillment, culture, and evaluation theory. *Journal of Happiness Studies*, 1(1), 41–78.

- Diener, E., Lucas, R. E., & Scollon, C. N. (2006). Beyond the hedonic treadmill: Revising the adaptation theory of well-being. *The American Psychologist*, *61*(4), 305–314.
- Diener, E., & Seligman, M. E. P. (2004). Beyond money: Toward an economy of well-being. *Psychological Science in the Public Interest*, *5*(1), 1–31.
- Diener, E., & Suh, E. (2000a). Measuring subjective well-being to compare the quality of life of cultures. In E. Diener & E. Suh (Eds.), *Culture and subjective well-being* (pp. 3–12). The MIT Press.
- Diener, E., & Suh, E. M. (2000b). Culture and subjective well-being. The MIT Press.
- Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, *125*(2), 276–302.
- Dietrich, M., Verdolini Abbott, K., Gartner-Schmidt, J., & Rosen, C. A. (2008). The frequency of perceived stress, anxiety, and depression in patients with common pathologies affecting voice. *Journal of Voice: Official Journal of the Voice Foundation*, 22(4), 472–488.
- Dik, B. J., Sargent, A. M., & Steger, M. F. (2008). Career development strivings: Assessing goals and motivation in career decision-making and planning. *Journal of Career Development*, *35*(1), 23–41.
- Dik, B. J., & Steger, M. F. (2008). Randomized trial of a calling-infused career workshop incorporating counselor self-disclosure. *Journal of Vocational Behavior*, *73*(2), 203–211.
- DiPasquale, L. D. (2012). *Harmony or discord: Disordered eating and personality traits of college music majors*. Unpublished Dissertation. UNT Digital Library; University of North Texas.
- Dobos, B., Piko, B. F., & Kenny, D. T. (2019). Music performance anxiety and its relationship with social phobia and dimensions of perfectionism. *Research Studies in Music Education*, *41*(3), 310–326.

- Dobrow, S. (2013). Dynamics of calling: A longitudinal study of musicians. *Journal of Organizational Behavior*, *34*(4), 431–452.
- Dobrow, S. R. (2006). *Having a calling: A longitudinal study of young musicians*. Unpublished doctoral dissertation]. Harvard University.
- Dobrow, S. R., & Tosti-Kharas, J. (2011). Calling: The development of a scale measure. *Personnel Psychology*, 64(4), 1001–1049.
- Dobson, M. (2010). Performing your self? Autonomy and self-expression in the work of jazz musicians and classical string players. *Music Performance Research*, *3*, 42–60.
- Dolan, P., Kudrna, L., & Stone, A. (2017). The measure matters: An investigation of evaluative and experience-based measures of wellbeing in time use data. *Social Indicators Research*, 134(1), 57–73.
- Domene, J. F. (2012). Calling and career outcome expectations: The mediating role of selfefficacy. *Journal of Career Assessment*, *20*(3), 281–292.
- Dommerholt, J. (2009). Performing arts medicine—Instrumentalist musicians part I general considerations. *Journal of Bodywork and Movement Therapies*, *13*(4), 311– 319.
- Douglass, R. P., Duffy, R. D., & Autin, K. L. (2016). Living a calling, nationality, and life satisfaction: A moderated, multiple mediator model. *Journal of Career Assessment*, 24(2), 253–269.
- Downie, R. S., Tannahill, C., & Tannahill, A. (1990). *Health promotion: Models and values.* Oxford: Oxford University Press.
- Drapeau, A., Marchand, A., & Beaulieu-Prevost, D. (2012). Epidemiology of psychological distress. In L. LAbate (Ed.), *Mental illnesses—Understanding, prediction and control* (pp. 155-134). InTech.
- Duarte, A. M. (2020). Artists' precarity in the context of their social integration. In T. Rachwał, R. Hepp, & D. Kergel (Eds.), *Precarious places: Social, cultural and*

*economic aspects of uncertainty and anxiety in everyday life* (pp. 19–39). Springer Fachmedien.

- Duffy, R., Allan, B., Autin, K., & Douglass, R. (2014). Living a calling and work well-being: A longitudinal study. *Journal of Counseling Psychology*, *61*(4), 605-15.
- Duffy, R. D., & Raque-Bogdan, T. L. (2010). The motivation to serve others: Exploring relations to career development. *Journal of Career Assessment*, *18*(3), 250–265.
- Duffy, R. D., & Sedlacek, W. E. (2007). The presence of and search for a calling: Connections to career development. *Journal of Vocational Behavior*, *70*(3), 590–601.
- Dunn, M. G., & O'Brien, K. M. (2009). Psychological health and meaning in life: Stress, social support, and religious coping in latina/latino immigrants. *Hispanic Journal of Behavioral Sciences*, 31(2), 204-227.
- Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review*, *95*(2), 256–273.
- Dykman, B. M. (1998). Integrating cognitive and motivational factors in depression: Initial tests of a goal-orientation approach. *Journal of Personality and Social Psychology*, 74(1), 139–158.
- Eisenberg, D., Gollust, S. E., Golberstein, E., & Hefner, J. L. (2007). Prevalence and correlates of depression, anxiety, and suicidality among university students. *The American Journal of Orthopsychiatry*, *77*(4), 534–542.
- Elliot, A. J., & McGregor, H. A. (1999). Test anxiety and the hierarchical model of approach and avoidance achievement motivation. *Journal of Personality and Social Psychology*, 76(4), 628–644.
- Emmerich, E., Rudel, L., & Richter, F. (2008). Is the audiologic status of professional musicians a reflection of the noise exposure in classical orchestral music? *European Archives of Oto-Rhino-Laryngology*, 265(7), 753–758.

- England, G. W., & Harpaz, I. (1990). How working is defined: National contexts and demographic and organizational role influences. *Journal of Organizational Behavior*, *11*(4), 253–266.
- Erikson, E. (1959). *Identity and the life cycle*. International Universities Press.

Erikson, E. H. (1950). Childhood and society. Norton.

Erikson, E. H. (1982). *The life cycle completed*. Norton.

EUROSTAT. (2019). Culture statistics: 2019 edition. EU Publications Office.

- EUROSTAT. (2020). Tertiary education statistics. EUROSTAT, European Union.
- Fancourt, D., & Finn, S. (2019). What is the evidence on the role of the arts in improving health and well-being? A scoping review. Copenhagen: WHO Regional Office for Europe.
- Fasbender, U., Deller, J., Wang, M., & Wiernik, B. M. (2014). Deciding whether to work after retirement: The role of the psychological experience of aging. *Journal of Vocational Behavior*, 84(3), 215–224.
- Fava, G. A. (1999). Well-being therapy: Conceptual and technical issues. *Psychotherapy and Psychosomatics*, *68*(4), 171–179.
- Fave, A. D., & Kocjan, G. Z. (2016). Well-being in the arts and crafts sector. In L. G. Oades, Steger, M. F., Delle Fave, A. & Passmore, J. (Eds.). *The Wiley Blackwell Handbook of the Psychology of Positivity and Strengths-Based Approaches at Work* (pp. 508– 526). John Wiley & Sons, Ltd.
- Fegg, M. J., Kramer, M., Bausewein, C., & Borasio, G. D. (2007). Meaning in life in the Federal Republic of Germany: Results of a representative survey with the Schedule for Meaning in Life Evaluation (SMiLE). *Health and Quality of Life Outcomes*, 5(1), 59.

- Feng, D., Su, S., Wang, L., & Liu, F. (2018). The protective role of self-esteem, perceived social support and job satisfaction against psychological distress among Chinese nurses. *Journal of Nursing Management*, 26(4), 366–372.
- Fernholz, I., Mumm, J. L. M., Plag, J., Noeres, K., Rotter, G., Willich, S. N., Ströhle, A., Berghöfer, A., & Schmidt, A. (2019). Performance anxiety in professional musicians: A systematic review on prevalence, risk factors and clinical treatment effects. *Psychological Medicine*, 49(14), 2287–2306.
- Ferrante, F. (2017). Great expectations: The unintended consequences of educational choices. *Social Indicators Research*, *131*(2), 745–767.
- Fetter, D. (1993). Life in the orchestra. *Maryland Medical Journal*, 42(3), 289–292.
- Figueira, C. (2013). Bem-estar nos estudantes do ensino superior: Papel das exigências e dos recursos percebidos no contexto académico e das atividades de voluntariado, Unpublished doctoral dissertation, University of Lisbon.
- Fishbein, M., Middlestadt, S. E., Ottati, V., Straus, S., & Ellis, A. (1988). Medical problems among ICSOM musicians: Overview of a national survey. *Medical Problems of Performing Artists*, 3, 1–8.
- Fjellman-Wiklund, A., & Sundelin, G. (1998). Musculoskeletal discomfort of music teachers: An eight-year perspective and psychosocial work factors. *International Journal of Occupational and Environmental Health*, 4(2), 89–98.
- Fletcher, R. H., Fletcher, S. W., & Fletcher, G. S. (2014). *Clinical epidemiology*. Wolters Kluwer.
- Flett, G. L., & Hewitt, P. L. (2002). Perfectionism and maladjustment: An overview of theoretical, definitional, and treatment issues. In G. L. Flett & PL. Hewitt (Eds.), *Perfectionism: Theory, research, and treatment* (pp. 5–31). American Psychological Association.

- Flum, H. (2015). Relationships and career development: An integrative approach. In P. J.
   Hartung, M. L. Savickas, & W. B. Walsh (Eds.), *APA handbook of career intervention*,
   *Volume 1: Foundations* (pp. 145–158). American Psychological Association.
- Fock, H., Yim, F., & Rodriguez, M. (2010). The effects of sales supervisor relationships on work meaning: The case of Canadian and Chinese salespersons. *Industrial Marketing Management*, 39(7), 1069–1077.
- Folkman, S., & Moskowitz, J. T. (2000). Positive affect and the other side of coping. *The American Psychologist*, *55*(6), 647–654.
- Forman-Hoffman, V., Muhuri, P., Novak, S., Pemberton, M., Ault, K., & Mannix, D. (2014). Psychological distress and mortality among adults in the U.S. household population: CBHSQ Data review. CBHSQ Data Review, Center for Behavioral Health Statistics and Quality, SAMHSA.
- Fotiadis, D. G., Fotiadou, E. G., Kokaridas, D. G., & Mylonas, A. C. (2013). Prevalence of musculoskeletal disorders in professional symphony orchestra musicians in Greece: A pilot study concerning age, gender, and instrument-specific results. *Medical Problems of Performing Artists*, 28(2), 91–95.
- Foxman, I., & Burgel, B. J. (2006). Musician health and safety: Preventing playing-related musculoskeletal disorders. AAOHN Journal: Official Journal of the American Association of Occupational Health Nurses, 54(7), 309–316.
- Franco-Paredes, K., Mancilla-Díaz, J. M., Vázquez-Arévalo, R., López-Aguilar, X., & Álvarez-Rayón, G. (2005). Perfectionism and eating disorders: A review of the literature. *European Eating Disorders Review*, 13(1), 61–70.
- Frankl, V. (1945). Man's search for meaning. Washington Square Press/Pocket Books.
- Frankl, V. E. (2004). On the theory and therapy of mental disorders: An introduction to logotherapy and existential analysis. Brunner-Routledge.
- Freund, A. M., & Ritter, J. O. (2009). Midlife crisis: A debate. *Gerontology*, 55(5), 582–591.

- Friedman, E. M., Hayney, M., Love, G. D., Singer, B. H., & Ryff, C. D. (2007). Plasma interleukin-6 and soluble IL-6 receptors are associated with psychological wellbeing in aging women. *Health Psychology*, 26(3), 305–313.
- Frijters, P., & Beatton, T. (2012). The mystery of the U-shaped relationship between happiness and age. *Journal of Economic Behavior & Organization*, *82*(2), 525–542.
- Fritz, B. S., & Avsec, A. (2007). The experience of flow and subjective well-being of music students. *Psihološka Obzorja / Horizons of Psychology*, *16*(2), 5–17.
- Fritzsche, B., & Parrish, T. (2005). Theories and research on job satisfaction. In R. Brown
  & R. Lent (Eds.), *Career development and counseling: Putting theory and research to work* (pp. 180–202). Wiley.
- Frosch, W. A. (1987). Moods, madness, and music. I. Major affective disease and musical creativity. *Comprehensive Psychiatry*, *28*(4), 315–322.
- Frost, R. O., Marten, P., Lahart, C., & Rosenblate, R. (1990). The dimensions of perfectionism. *Cognitive Therapy and Research*, *14*(5), 449–468.
- Frucht, S. J. (2009). Embouchure dystonia—Portrait of a task-specific cranial dystonia. *Movement Disorders*, *24*(12), 1752–1762.
- Frucht, S. J., Fahn, S., Greene, P. E., O'Brien, C., Gelb, M., Truong, D. D., Welsh, J., Factor, S.,
  & Ford, B. (2001). The natural history of embouchure dystonia. *Movement Disorders*, *16*(5), 899–906.
- Fullagar, C. J., Knight, P. A., & Sovern, H. S. (2013). Challenge/skill balance, flow, and performance anxiety. *Applied Psychology: An International Review*, 62(2), 236– 259.
- Furukawa, T. A., Kawakami, N., Saitoh, M., Ono, Y., Nakane, Y., Nakamura, Y., Tachimori, H.,
  Iwata, N., Uda, H., Nakane, H., Watanabe, M., Naganuma, Y., Hata, Y., Kobayashi, M.,
  Miyake, Y., Takeshima, T., & Kikkawa, T. (2008). The performance of the Japanese

version of the K6 and K10 in the World Mental Health Survey Japan. *International Journal of Methods in Psychiatric Research*, *17*(3), 152–158.

- Furukawa, T. A., Kessler, R. C., Slade, T., & Andrews, G. (2003). The performance of the K6 and K10 screening scales for psychological distress in the Australian National Survey of Mental Health and Well-Being. *Psychological Medicine*, 33(2), 357–362.
- Furuya, S., Tominaga, K., Miyazaki, F., & Altenmüller, E. (2015). Losing dexterity: Patterns of impaired coordination of finger movements in musician's dystonia. *Scientific Reports*, 5(1), 13360.
- Fushimi, M., Saito, S., Shimizu, T., Kudo, Y., Seki, M., & Murata, K. (2011). Prevalence of psychological distress, as measured by the Kessler 6 (K6) and related factors in Japanese employees. *Community Mental Health Journal*, 48, 328–335.
- Gable, S. L., Haidt, J. (2005). What (and why) is positive psychology? *Review of General Psychology*, *9*(*2*), *103–110.*
- Galambos, N. L., Krahn, H. J., Johnson, M. D., & Lachman, M. E. (2020). The U shape of happiness across the life course: Expanding the discussion. *Perspectives on Psychological Science*, 15(4), 898–912.
- Gallagher, M. W., Lopez, S. J., & Preacher, K. J. (2009). The hierarchical structure of wellbeing. *Journal of Personality*, *77*(4), 1025–1050.
- Galmiche, M., Déchelotte, P., Lambert, G., & Tavolacci, M. P. (2019). Prevalence of eating disorders over the 2000–2018 period: A systematic literature review. *The American Journal of Clinical Nutrition*, 109(5), 1402–1413.
- Gambichler, T., Boms, S., & Freitag, M. (2004). Contact dermatitis and other skin conditions in instrumental musicians. *BMC Dermatology*, *4*(1), 3.
- Garner, D. M., & Garfinkel, P. E. (1980). Socio-cultural factors in the development of anorexia nervosa. *Psychological Medicine*, 10(4), 647–656.

- George, J. M. (1991). Time structure and purpose as a mediator of work-life linkages. *Journal of Applied Social Psychology*, *21*(4), 296–314.
- George, L., & Park, C. (2016). Meaning in life as comprehension, purpose, and mattering: Toward integration and new research questions. *Review of General Psychology*, 20(3), 205–220.
- Getzels, J., & Csikszentmihalyi, M. (1976). *The creative vision: A longitudinal study of problem finding in art*. John Wiley & Sons.
- Gispert, R., Rajmil, L., Schiaffino, A., & Herdman, M. (2003). Sociodemographic and healthrelated correlates of psychiatric distress in a general population. *Social Psychiatry and Psychiatric Epidemiology*, *38*(12), 677–683.
- Gjermunds, N., Brechan, I., Johnsen, S., & Watten, R. G. (2020). Personality traits in musicians. *Current Issues in Personality Psychology*, 8(2), 100–107.
- Goldberg, L. R. (1990). An alternative "description of personality": The Big-Five factor structure. *Journal of Personality and Social Psychology*, 59(6), 1216–1229.
- Gomez, V., Grob, A., & Orth, U. (2013). The adaptive power of the present: Perceptions of past, present, and future life satisfaction across the life span. *Journal of Research in Personality*, 47(5), 626–633.
- Góngora, V., & Solano, A. (2011). Validación del cuestionario de significado de la vida MLQ en población adulta y adolescente argentina [Validation of the Meaning in Life Questionnaire in an Argentinean sample of adults and adolescents]. *Interamerican Journal of Psychology*, 45(3), 395–404.
- Gorges, S., Alpers, G. W., & Pauli, P. (2007). Musical performance anxiety as a form of social anxiety? In A. Williamon (Ed.). *Proceedings of the ISPS* (pp. 67–72). Assoc. Européenne des Conservatoire, Acad. de Musique et Musikhochschulen (AEC).

- Gotwals, J. K., Stoeber, J., Dunn, J. G. H., & Stoll, O. (2012). Are perfectionistic strivings in sport adaptive? A systematic review of confirmatory, contradictory, and mixed evidence. *Canadian Psychology/Psychologie Canadienne*, *53*(4), 263–279.
- Grant, A. M. (2008). The significance of task significance: Job performance effects, relational mechanisms, and boundary conditions. *Journal of Applied Psychology*, *93*(1), 108–124.
- Grant, C. (2009). Letting it go: An autoethnographic account of a musicians loss. In Bartleet, B., & Ellis, C. (Eds.). *Music Autoethnographies: Making Autoethnography Sing /Making Music Personal*, (pp.121-135). Bowen Hills: Australian Academic Press.
- Grant, D., Kravitz-Wirtz, N., Aguilar-Gaxiola, S., Sribney, W. M., Aydin, M., & Brown, E. R.
   (2010). Mental health status and use of mental health services by California adults.
   *Policy Brief (UCLA Center for Health Policy Research)*, *PB2010-6*, 1–8.
- Greasley, A. E., Fulford, R. J., Pickard, M., & Hamilton, N. (2020). Help Musicians UK hearing survey: Musicians' hearing and hearing protection. *Psychology of Music*, 48(4), 529–546.
- Greenspoon, P. J., & Saklofske, D. H. (2001). Toward an integration of subjective wellbeing and psychopathology. *Social Indicators Research*, *54*(1), 81–108.
- Gross, S. A., & Musgrave, G. (2020). *Can music make you sick? Measuring the price of musical ambition*. University of Westminster Press.
- Gupta, M., Kumar, V., & Singh, M. (2014). Creating satisfied employees through workplace spirituality: A study of the private insurance sector in Punjab (India). *Journal of Business Ethics*, 122(1), 79–88.
- Guptill, C. (2011). The lived experience of working as a musician with an injury. *Work, 40*(3), 269–280.

- Guptill, C. A., & Golem, M. B. (2008). Case study: Musicians' playing-related injuries. *Work*, 30(3), 307-310.
- Guptill, C., Zaza, C., & Paul, S. (2000). An occupational study of physical playing-related injuries in college music students. *Medical Problems of Performing Artists*, 15(2), 86–90.
- Habe, K., Biasutti, M. & Kajtna, T. (2019) Flow and satisfaction with life in elite musicians and top athletes. *Frontiers in Psychology*, 10:698.
- Hackman, J. R., & Lawler, E. E. (1971). Employee reactions to job characteristics. *Journal of Applied Psychology*, *55*(3), 259–286.
- Hackman, J.R. & Oldham, G.R. (1974). *The job diagnostic survey: An instrument for the diagnosis of jobs and the evaluation of job redesign projects*. Department of Administrative Sciences: Yale University.
- Hackman, J. R., & Oldham, G. R. (1976). Motivation through the design of work: Test of a theory. *Organizational Behavior & Human Performance*, *16*(2), 250–279.
- Hagberg, M. (1996). ABC of work related disorders. Neck and arm disorders. *BMJ*, *313*(7054), 419–422.
- Hagberg, M., Thiringer, G., & Brandström, L. (2005). Incidence of tinnitus, impaired hearing and musculoskeletal disorders among students enrolled in academic music education—A retrospective cohort study. *International Archives of Occupational and Environmental Health*, 78(7), 575–583.
- Hall, H. K., Kerr, A. W., & Matthews, J. (1998). Precompetitive anxiety in sport: The contribution of achievement goals and perfectionism. *Journal of Sport and Exercise Psychology*, 20(2), 194–217.
- Halleland, H. B., Harris, A., Sørnes, S., Murison, R., & Ursin, H. (2009). Subjective health complaints, stress, and coping in orchestra musicians. *Medical Problems of Performing Artists*, 24(2), 58–62.

- Haller, C., & Courvoisier, D. (2010). Personality and thinking style in different creative domains. *Psychology of Aesthetics and Creativity in the Arts*, *4*, 149–160.
- Hambleton, R. K., Swaminathan, H., & Rogers, H. J. (1991). *Fundamentals of item response theory*. Sage Publications, Inc.
- Hamilton, L. H., Kella, J. J., & Hamilton, W. G. (1995). Personality and occupational stress in elite performers. *Medical Problems of Performing Artists*, *10*, 86–89.
- Hansen, P. A., & Reed, K. (2006). Common musculoskeletal problems in the performing artist. *Physical Medicine and Rehabilitation Clinics*, *17*(4), 789–801.
- Hargreaves, D., Miell, D., & MacDonald, R. (2002). What are musical identities, and why are they important. In D. MacDonald, D. Hargreaves, & D. Miell (Eds.), *Musical Identities* (pp. 1–20). Oxford University Press.
- Harpaz, I., & Fu, X. (2002). The structure of the meaning of work: A relative stability amidst change. *Human Relations*, *55*(6), 639–667.
- Hart, E., and Di Blasi, Z. (2015). Combined flow in musical jam sessions: A pilot qualitative study. *Psychology of Music*, 43, 275–290.
- Hart, P. M. (1999). Predicting employee life satisfaction: A coherent model of personality, work, and nonwork experiences, and domain satisfactions. *Journal of Applied Psychology*, 84(4), 564–584.
- Harvard Medical School. (2005). *The K10 and K6 Scales*. Retrieved from https://www.hcp.med.harvard.edu/ncs/k6\_scales.php.
- Hasson, D., Theorell, T., Liljeholm-Johansson, Y., & Canlon, B. (2009). Psychosocial and physiological correlates of self-reported hearing problems in male and female musicians in symphony orchestras. *International Journal of Psychophysiology: Official Journal of the International Organization of Psychophysiology*, 74(2), 93–100.

- Headey, B., Kelley, J., & Wearing, A. (1993). Dimensions of mental health: Life satisfaction, positive affect, anxiety and depression. *Social Indicators Research*, 29(1), 63–82.
- Headey, B., Veenhoven, R., & Wearing, A. (1991). Top-down versus bottom-up theories of subjective well-being. *Social Indicators Research*, *24*(1), 81–100.
- Hedberg, P., Gustafson, Y., & Brulin, C. (2010). Purpose in life among men and women aged 85 years and older. *The International Journal of Aging and Human Development*, 70(3), 213–229.
- Heine, S. J., Proulx, T., & Vohs, K. D. (2006). The meaning maintenance model: On the coherence of social motivations. *Personality and Social Psychology Review*, 10(2), 88–110.
- Heintzelman, S. J., & King, L. A. (2014). Life is pretty meaningful. *American Psychologist*, 69(6), 561–574.
- Hellevik, O. (2017). The U-shaped age–happiness relationship: Real or methodological artifact? *Quality & Quantity*, *51*(1), 177–197.
- Heming, M. J. E. (2004). Occupational injuries suffered by classical musicians through overuse. *Clinical Chiropractic*, *7*(2), 55–66.
- Henson, R. K. (2001). Understanding internal consistency reliability estimates: A conceptual primer on coefficient alpha. *Measurement and Evaluation in Counseling and Development*, 34(3), 177–189.
- Hides, L., Quinn, C., Stoyanov, S., Cockshaw, W., Mitchell, T., & Kavanagh, D. J. (2016). Is the mental wellbeing of young Australians best represented by a single, multidimensional or bifactor model? *Psychiatry Research*, 241, 1–7.
- Hildebrandt, H., Nübling, M., & Candia, V. (2012). Increment of fatigue, depression, and stage fright during the first year of high-level education in music students. *Medical Problems of Performing Artists*, *27*(1), 43–48.

- Hill, A. P., & Curran, T. (2016). Multidimensional perfectionism and burnout: A metaanalysis. *Personality and Social Psychology Review*, *20*(3), 269–288.
- Hill, P. L., & Turiano, N. A. (2014). Purpose in life as a predictor of mortality across adulthood. *Psychological Science*, *25*(7), 1482–1486.
- Hill, P. L., & Weston, S. J. (2019). Evaluating eight-year trajectories for sense of purpose in the health and retirement study. *Aging & Mental Health*, *23*(2), 233–237.
- Hilton, M. F., & Whiteford, H. A. (2010). Interacting with the public as a risk factor for employee psychological distress. *BMC Public Health*, *10*(1), 435.
- Hilton, M., Whiteford, H., Sheridan, J., Cleary, C., Chant, D., Wang, P., & Kessler, R. (2008). The prevalence of psychological distress in employees and associated occupational risk factors. *Journal of Occupational and Environmental Medicine*, 50(7), 746–757.
- Hofmann, S. G., & Dibartolo, P. M. (2000). An instrument to assess self-statements during public speaking: Scale development and preliminary psychometric properties. *Behavior Therapy*, 31(3), 499–515.
- Holahan, C. K., Holahan, C. J., & Suzuki, R. (2008). Purposiveness, physical activity, and perceived health in cardiac patients. *Disability and Rehabilitation: An International, Multidisciplinary Journal*, *30*(23), 1772–1778.
- Holahan, C. K., Holahan, C. J., Velasquez, K. E., Jung, S., North, R. J., & Pahl, S. A. (2011).
  Purposiveness and leisure-time physical activity in women in early midlife. *Women & Health*, *51*(7), 661–675.
- Holahan, C. K., & Suzuki, R. (2006). Motivational factors in health promoting behavior in later aging. *Activities, Adaptation & Aging, 30*(1), 47–60.

Holbeche, L. (2004). In search of meaning at work. Roffey Park Institute.

- Holst, G. J., Paarup, H. M., & Baelum, J. (2012). A cross-sectional study of psychosocial work environment and stress in the Danish symphony orchestras. *International Archives of Occupational and Environmental Health*, *85*(6), 639–649.
- Homan, K. J., & Boyatzis, C. J. (2010). Religiosity, sense of meaning, and health behavior in older adults. *International Journal for the Psychology of Religion*, *20*(3), 173–186.
- Hone, L. C., Jarden, A., Schofield, G. M., & Duncan, S. (2014). Measuring flourishing: The impact of operational definitions on the prevalence of high levels of wellbeing. *International Journal of Wellbeing*, 4(1), 62–90.
- Hopcroft, R. L., & Bradley, D. B. (2007). The sex difference in depression across 29 countries. *Social Forces*, *85*(4), 1483–1507.
- Hoppmann, R. (2010). Musculoskeletal problems of instrumental musicians. In R. Sataloff,
  A. Brandfonbrener, & R. Lederman RJ (Eds.), *Performing Arts Medicine* (pp. 207-227). Narbeth: Science and Medicine.
- Horton, R., & Shweder, R. (2004). Ethnic conservation, psychological well-being and the downside of mainstreaming: General differences. In O. Brim, C. Ryff, & R. Kessler (Eds.), *How healthy are we: A national study of well-being at midlife* (pp. 373–397). University of Chicago Press.
- Horvath, J. (2008). Adopting a healthy approach to instrumental music-making. *Music Educators Journal*, 94 (3), 30-34.
- Howell, D. C. (1987). Statistical methods for psychology. Wadsworth.
- Howell, R. T., Kern, M. L., & Lyubomirsky, S. (2007). Health benefits: Meta-analytically determining the impact of well-being on objective health outcomes. *Health Psychology Review*, *1*(1), 83–136.
- Hu, J., & Hirsh, J. (2017). Accepting lower salaries for meaningful work. *Frontiers in Psychology*, *8*, 1649.

- Humphrey, S. E., Nahrgang, J. D., & Morgeson, F. P. (2007). Integrating motivational, social, and contextual work design features: A meta-analytic summary and theoretical extension of the work design literature. *Journal of Applied Psychology*, 92(5), 1332–1356.
- Huta, V., & Ryan, R. M. (2010). Pursuing pleasure or virtue: The differential and overlapping well-being benefits of hedonic and eudaimonic motives. *Journal of Happiness Studies: An Interdisciplinary Forum on Subjective Well-Being*, 11(6), 735–762.
- Huta, V., & Waterman, A. S. (2014). Eudaimonia and its distinction from hedonia: Developing a classification and terminology for understanding conceptual and operational definitions. *Journal of Happiness Studies: An Interdisciplinary Forum on Subjective Well-Being*, 15(6), 1425–1456.
- Institute for Social & Economic Research (ISER). (2012). Understanding Society, the UK Household Longitudinal Survey & British Household Panel Survey (UKHLS). University of Essex.
- Ioannou, C. I., & Altenmüller, E. (2015). Approaches to and treatment strategies for playing-related pain problems among Czech instrumental music students: An epidemiological study. *Medical Problems of Performing Artists*, *30*(3), 135–142.
- Ioannou, C. I., Furuya, S., & Altenmüller, E. (2016). The impact of stress on motor performance in skilled musicians suffering from focal dystonia: Physiological and psychological characteristics. *Neuropsychologia*, *85*, 226–236.
- Ivtzan, I. (2008). Self Actualisation: For individualistic cultures only? *International Journal on Humanistic Ideology*, *1*, 111–138.
- Jabusch, H.-C., & Altenmüller, E. (2006). Epidemiology, phenomenology, and therapy of musician's cramp. In E. Altenmüller, M. Wiesendanger, & J. Kesselring (Eds.), *Music, motor control and the brain* (pp. 265–282). Oxford University Press.

- Jabusch, H.-C., Vauth, H., & Altenmüller, E. (2004). Quantification of focal dystonia in pianists using scale analysis. *Movement Disorders: Official Journal of the Movement Disorder Society*, *19*(2), 171–180.
- Jacobi, F., Wittchen, H.-U., Hölting, C., Höfler, M., Pfister, H., Müller, N., & Lieb, R. (2004). Prevalence, co-morbidity and correlates of mental disorders in the general population: Results from the German Health Interview and Examination Survey (GHS). *Psychological Medicine*, *34*(4), 597–611.
- Jacukowicz, A. (2016). Psychosocial work aspects, stress and musculoskeletal pain among musicians. A systematic review in search of correlates and predictors of playing-related pain. *Work*, *54*(3), 657–668.
- Jahn, A. F. (2009). Medical management of the professional singer: An overview. *Medical Problems of Performing Artists*, *24*(1), 3–9.
- Jahoda, M. (1958). *Current concepts of positive mental health*. Basic Books.
- Jahoda, M. (1982). *Employment and unemployment: A social-psychological analysis*. Cambridge University Press.
- James, C., Tynan, R., Roach, D., Leigh, L., Oldmeadow, C., Rahman, M., & Kelly, B. (2018). Correlates of psychological distress among workers in the mining industry in remote Australia: Evidence from a multi-site cross-sectional survey. *PLOS ONE*, *13*(12), e0209377.
- James, I. M. (2000). Survey of orchestras. In R. Tubiana & P. Amadio (Eds.), *Medical Problems of the Instrumentalist Musician* (pp. 195–201). Martin Dunitz.
- Jamison, K. R. (1989). Mood disorders and patterns of creativity in British writers and artists. *Psychiatry*, *52*(2), 125–134.
- Jang, K. L., Livesley, W. J., & Vemon, P. A. (1996). Heritability of the Big Five personality dimensions and their facets: A twin study. *Journal of Personality*, *64*(3), 577–592.

- Jankovic, J., & Ashoori, A. (2008). Movement disorders in musicians. *Movement Disorders*, *23*(14), 1957–1965.
- Jansen, E. J. M., Helleman, H. W., Dreschler, W. A., & de Laat, J. A. P. M. (2009). Noise induced hearing loss and other hearing complaints among musicians of symphony orchestras. *International Archives of Occupational and Environmental Health*, 82(2), 153–164.
- Jansson, E., & Karlsson, K. (1983). Sound levels recorded within the symphony orchestra and risk criteria for hearing loss. *Scandinavian Audiology*, *12*(3), 215–221.
- Johansson, Y. L., & Theorell, T. (2003). Satisfaction with work task quality correlates with employee health: A study of 12 professional orchestras. *Medical Problems of Performing Artists*, *18*(4), 141–149.
- Johnson, N.P. (2004). Advantages to transforming the receiver operating characteristic (ROC) curve into likelihood ratio co-ordinates. *Statistics in Medicine*, *23*(14): 2257-66.
- Johnson, S., Cooper, C., Cartwright, S., Donald, I., Taylor, P., & Cook, C. (2005). The experience of work-related stress across occupations. *Journal of Managerial Psychology*, *20*(2), 178-187.
- Jorm, A. F. (2000). Does old age reduce the risk of anxiety and depression? A review of epidemiological studies across the adult life span. *Psychological Medicine*, *30*(1), 11–22.
- Jorm, A. F., Patten, S. B., Brugha, T. S., & Mojtabai, R. (2017). Has increased provision of treatment reduced the prevalence of common mental disorders? Review of the evidence from four countries. *World Psychiatry*, *16*(1), 90–99.
- Jorm, A. F., Windsor, T. D., Dear, K. B. G., Anstey, K. J., Christensen, H., & Rodgers, B. (2005). Age group differences in psychological distress: The role of psychosocial risk factors that vary with age. *Psychological Medicine*, *35*(9), 1253–1263.

- Joshanloo, M., Bobowik, M., & Basabe, N. (2016). Factor structure of mental well-being: Contributions of exploratory structural equation modeling. *Personality and Individual Differences*, *102*, 107–110.
- Joshanloo, M., Sirgy, M. J., & Park, J. (2018). Directionality of the relationship between social well-being and subjective well-being: Evidence from a 20-year longitudinal study. *Quality of Life Research*, *27*(8), 2137–2145.
- Jovanović, V. (2015). Structural validity of the Mental Health Continuum-Short Form: The bifactor model of emotional, social and psychological well-being. *Personality and Individual Differences*, *75*, 154–159.
- Judge, T. A., & Piccolo, R. F. (2004). Transformational and transactional leadership: A meta-analytic test of their relative validity. *Journal of Applied Psychology*, 89(5), 755–768.
- Jung, C. (1933). Modern man in search of a soul. Ark.
- Kähäri, K. R., Axelsson, A., Hellström, P.-A., & Zachau, G. (2001). Hearing assessment of classical orchestral musicians. *Scandinavian Audiology*, *30*(1), 13–23.
- Kähäri, K., Zachau, G., Eklöf, M., & Möller, C. (2004). The influence of music and stress on musicians' hearing. *Journal of Sound and Vibration*, *277*(3), 627–631.
- Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, *33*(4), 692–724.
- Kahneman, D., Diener, E., & Schwarz, N. (Eds.). (1999). *Well-being: The foundations of hedonic psychology*. Russell Sage Foundation.
- Kaneko, Y., Lianza, S., & Dawson, W. J. (2005). Pain as an incapacitating factor in symphony orchestra musicians in Sao Paulo, Brazil. *Medical Problems of Performing Artists*, 20(4), 168–174.

- Kapsetaki, M. E., & Easmon, C. (2017). Eating disorders in non-dance performing artists:
  A systematic literature review. *Medical Problems of Performing Artists*, 32(4), 227–234.
- Kapsetaki, M. E., & Easmon, C. (2019). Eating disorders in musicians: A survey investigating self-reported eating disorders of musicians. *Eating and Weight Disorders - Studies on Anorexia, Bulimia and Obesity*, 24(3), 541–549.
- Karasawa, M., Curhan, K. B., Markus, H. R., Kitayama, S. S., Love, G. D., Radler, B. T., & Ryff,
  C. D. (2011). Cultural perspectives on aging and well-being: A comparison of Japan and the United States. *The International Journal of Aging and Human Development*, *73*(1), 73–98.
- Karmeier, H. (2012). Aktuelle Probespielstatistik: Erfassungszeitraum: Spielzeiten 2007/08 bis 2009/10 [Statistics for orchestra auditions: Seasons 2007/08 to 2009/10]. Das Orchester, 63(3), 32–35.
- Kashdan, T. B., Rose, P., & Fincham, F. D. (2004). Curiosity and exploration: Facilitating positive subjective experiences and personal growth opportunities. *Journal of Personality Assessment*, 82(3), 291–305.
- Kashdan, T. B., & Steger, M. F. (2007). Curiosity and pathways to well-being and meaning in life: Traits, states, and everyday behaviors. *Motivation and Emotion*, *31*(3), 159– 173.
- Kashdan, T., & Breen, W. (2007). *Materialism and diminished well-being: Experiential avoidance as a mediating mechanism*. *26*(5), 521–539.
- Kaspersen, M. & Gotestam, K.G. (2002). A survey of music performance anxiety among Norwegian music students. *European Journal of Psychiatry*, 16 (2), 69–80.
- Kaufman-Cohen, Y., & Ratzon, N. Z. (2011). Correlation between risk factors and musculoskeletal disorders among classical musicians. *Occupational Medicine*, 61(2), 90–95.

Kelly Services. (2009). Kelly Global Work Force Index press release. Kelly Services.

- Kemp, A. E. (1996). *The musical temperament: Psychology and personality of musicians*. Oxford University Press.
- Kennett, P., & Lomas, T. (2015). Making meaning through mentoring: Mentors finding fulfilment at work through self-determination and self-reflection. *International Journal of Evidence Based Coaching and Mentoring*, 13(2), 29–44.
- Kenny, D. T. (2010). Negative emotions in music making: Performance anxiety. In Juslin,
  P. & Sloboda, J. (Eds). *Handbook of Music and Emotion: Theory, Research, Applications* (pp. 425-45). OUP.
- Kenny, D., & Ackermann, B. (2012). Optimizing physical and psychological health in performing musicians. In Hallam, S., Cross, I. & Thaut, T. (Eds.), *The Oxford handbook of music psychology* (pp. 390–400). Oxford University Press.
- Kenny, D., & Ackermann, B. (2015). Performance-related musculoskeletal pain, depression and music performance anxiety in professional orchestral musicians: A population study. *Psychology of Music*, *43*(1), 43–60.
- Kenny, D., Driscoll, T., & Ackermann, B. (2014). Psychological well-being in professional orchestral musicians in Australia: A descriptive population study. *Psychology of Music*, 42(2), 210–232.
- Kenny, D. T. (2009, December). The factor structure of the revised Kenny Music Performance Anxiety Inventory. Paper presented at the International Symposium on Performance Science, Auckland, New Zealand.
- Kenny, D. T., Davis, P., & Oates, J. (2004). Music performance anxiety and occupational stress amongst opera chorus artists and their relationship with state and trait anxiety and perfectionism. *Journal of Anxiety Disorders*, 18(6), 757–777.
- Kenny, D. T., Driscoll, T., & Ackermann, B. J. (2016). Is playing in the pit really the pits? Pain, strength, music performance anxiety, and workplace satisfaction in

professional musicians in stage, pit, and combined stage/pit orchestras. *Medical Problems of Performing Artists*, *31*(1), 1–7.

- Kessler, K., & Mroczek, D. (1992). An update of the development of mental health screening scales for the US national health interview study. *Ann Arbor, MI: Survey Research Center of the Institute for Social Research. University of Michigan.*
- Kessler, R. C., Amminger, G. P., Aguilar-Gaxiola, S., Alonso, J., Lee, S., & Ustün, T. B. (2007). Age of onset of mental disorders: A review of recent literature. *Current Opinion in Psychiatry*, 20(4), 359–364.
- Kessler, R. C., Andrews, G., Colpe, L. J., Hiripi, E., Mroczek, D. K., Normand, S. L. T., Walters, E. E., & Zaslavsky, A. M. (2002). Short screening scales to monitor population prevalences and trends in non-specific psychological distress. *Psychological Medicine*, *32*(6), 959–976.
- Kessler, R. C., Barker, P. R., Colpe, L. J., Epstein, J. F., Gfroerer, J. C., Hiripi, E., Howes, M. J., Normand, S.-L. T., Manderscheid, R. W., Walters, E. E., & Zaslavsky, A. M. (2003).
  Screening for serious mental illness in the general population. *Archives of General Psychiatry*, 60(2), 184.
- Kessler, R. C., Berglund, P., Zhao, S., Leaf, P., Kouzis, A., Bruce, M., Friedman, R., Grosser, R., Kennedy, C., Narrow, W., Kuehnel, T., Laska, E., Manderscheld, R., Rosenheck, R., Santoni, T., & Schneier, M. (1996). The 12-month prevalence and correlates of Serious Mental Illness (SMI) pp. 59–70. In R. Manderscheid & M. Sonnenschein (Eds.), *Mental Health, United States 1996* (pp. 59–70). US Government Printing Office.
- Kessler, R. C., Chiu, W. T., Demler, O., Merikangas, K. R., & Walters, E. E. (2005). Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*, 62(6), 617–627.
- Kessler, R. C., Demler, O., Frank, R. G., Olfson, M., Pincus, H. A., Walters, E. E., Wang, P., Wells, K. B., & Zaslavsky, A. M. (2005). Prevalence and treatment of mental

disorders, 1990 to 2003. *The New England Journal of Medicine*, 352(24), 2515–2523. h

- Kessler, R. C., Green, J. G., Gruber, M. J., Sampson, N. A., Bromet, E., Cuitan, M., Furukawa, T. A., Gureje, O., Hinkov, H., Hu, C.-Y., Lara, C., Lee, S., Mneimneh, Z., Myer, L., Oakley-Browne, M., Posada-Villa, J., Sagar, R., Viana, M. C., & Zaslavsky, A. M. (2010). Screening for serious mental illness in the general population with the K6 screening scale: Results from the WHO World Mental Health (WMH) survey initiative. *International Journal of Methods in Psychiatric Research*, 19(S1), 4–22. h
- Kessler, R. C., McGonagle, K. A., Nelson, C. B., Hughes, M., Swartz, M., & Blazer, D. G. (1994). Sex and depression in the national comorbidity survey. II: Cohort effects. *Journal* of Affective Disorders, 30(1), 15–26.
- Kessler, R. C., Merikangas, K. R., Berglund, P., Eaton, W. W., Koretz, D. S., & Walters, E. E. (2003). Mild disorders should not be eliminated from the DSM-V. Archives of General Psychiatry, 60(11), 1117–1122.
- Kessler, R., Gilman, S., Thornton, L., & Kendler, K. (2004). Health, well-being, and social responsibility in the MIDUS twin and sibling subsamples. In Brim O.G., Ryff C.D., & Kessler R.C. (Eds.), *How healthy are we?: A national study of well-being at midlife* (pp. 124–152). Chicago: University of Chicago Press.
- Kessler, R., & Mroczek, D. (1994). Final version of our non-specific Psychological Distress Scale. Survey Research Center of the Institute for Social Research: University of Michigan.
- Keyes, C. L. M. (1998). Social well-being. Social Psychology Quarterly, 61(2), 121–140.
- Keyes, C. L. M. (2002). The Mental Health Continuum: From Languishing to Flourishing in Life. *Journal of Health and Social Behavior*, *43*(2), 207–222.
- Keyes, C. L. M. (2003). Complete mental health: An agenda for the 21st century. In C. L. M.
  Keyes & J. Haidt (Eds.), *Flourishing: Positive psychology and the life well-lived* (pp. 293–312). American Psychological Association.

- Keyes, C. L. M. (2005). Mental illness and/or mental health? Investigating axioms of the complete state model of health. *Journal of Consulting and Clinical Psychology*, 73(3), 539–548.
- Keyes, C. L. M. (2006a). The subjective well-being of America's youth: Toward a comprehensive assessment. *Adolescent & Family Health*, 4(1), 3–11.
- Keyes, C. L. M. (2006b). Subjective well-being in mental health and human development research worldwide: An introduction. *Social Indicators Research*, *77*(1), 1–10.
- Keyes, C. L. M. (2006c). Mental health in adolescence: Is America's youth flourishing? *The American Journal of Orthopsychiatry*, *76*(3), 395–402.
- Keyes, C. L. M. (2007). Promoting and protecting mental health as flourishing: A complementary strategy for improving national mental health. *The American Psychologist*, 62(2), 95–108.
- Keyes, C. L. M. (2008). Mental Health Continuum—Long Form. Available at https://booksite.elsevier.com/9780123745170/Chapter%202/Chapter\_2\_Work sheet\_2.5.pdf
- Keyes, C. L. M. (2009a). Atlanta: Brief description of the mental health continuum short form (MHC-SF). Retrieved from https://peplab.web.unc.edu/wpcontent/uploads/sites/18901/2018/11/MHC-SFoverview.pdf
- Keyes, C. L. M. (2009b). The black–white paradox in health: Flourishing in the face of social inequality and discrimination. *Journal of Personality*, *77*(6), 1677–1706.
- Keyes, C. L. M. (Ed.). (2013). *Mental well-being: International contributions to the study of Positive Mental Health*. Springer Netherlands.
- Keyes, C. L. M. (2018). *Overview of The Mental Health Continuum Short Form (MHC-SF)*. Retrieved from https://doi.org/10.13140/RG.2.2.24204.62088

- Keyes, C. L. M., Dhingra, S. S., & Simoes, E. J. (2010). Change in level of Positive Mental Health as a predictor of future risk of mental illness. *American Journal of Public Health*, 100(12), 2366–2371.
- Keyes, C. L. M., & Grzywacz, J. G. (2002). Complete health: Prevalence and predictors among U.S. adults in 1995. *American Journal of Health Promotion*, *17*(2), 122–131.
- Keyes, C. L. M., & Grzywacz, J. G. (2005). Health as a complete state: The added value in work performance and healthcare costs. *Journal of Occupational and Environmental Medicine*, 47(5), 523–532.
- Keyes, C. L. M., & Ryff, C. D. (1998). Generativity in adult lives: Social structural contours and quality of life consequences. In D. P. McAdams & E. de St. Aubin (Eds.), *Generativity and adult development: How and why we care for the next generation* (pp. 227–263). American Psychological Association.
- Keyes, C. L. M., & Ryff, C. D. (1999). Psychological well-being in midlife. In S. L. Willis & J. D. Reid (Eds.), *Life in the Middle* (pp. 161–180). Academic Press.
- Keyes, C. L. M., Shmotkin, D., & Ryff, C. D. (2002). Optimizing well-being: The empirical encounter of two traditions. *Journal of Personality and Social Psychology*, 82(6), 1007–1022.
- Keyes, C. L. M., Wissing, M., Potgieter, J. P., Temane, M., Kruger, A., & van Rooy, S. (2008). Evaluation of the mental health continuum–short form (MHC–SF) in setswanaspeaking South Africans. *Clinical Psychology & Psychotherapy*, 15(3), 181–192.
- Keyes, C., & Shapiro, A. (2004). Social well-being in the United States: A descriptive epidemiology. In O. Brim, C. D. Ryff, & R. Kessler (Eds.), *How healthy are we?: A national study of well-being at midlife* (pp. 350–372). University of Chicago Press.
- Keyes, K. M., Nicholson, R., Kinley, J., Raposo, S., Stein, M. B., Goldner, E. M., & Sareen, J. (2014). Age, period, and cohort effects in psychological distress in the United States and Canada. *American Journal of Epidemiology*, *179*(10), 1216–1227.

- Khalsa, S. B. S., Shorter, S. M., Cope, S., Wyshak, G., & Sklar, E. (2009). Yoga ameliorates performance anxiety and mood disturbance in young professional musicians. *Applied Psychophysiology and Biofeedback*, *34*(4), 279–289.
- Khan, A., Chien, C.-W., & Burton, N. W. (2014). A new look at the construct validity of the K6 using Rasch analysis. *International Journal of Methods in Psychiatric Research*, 23(1), 1–8.
- Khumalo, I., Wissing, M., & Schutte, L. (2014). Presence of meaning and search for meaning as mediators between spirituality and psychological well-being in a South African sample. *Journal of Psychology in Africa*, 24, 97–114.
- Kilkkinen, A., Kao-Philpot, A., O'Neil, A., Philpot, B., Reddy, P., Bunker, S., & Dunbar, J. (2007). Prevalence of psychological distress, anxiety and depression in rural communities in Australia. *The Australian Journal of Rural Health*, 15(2), 114–119.
- Kim, E. S., Sun, J. K., Park, N., & Peterson, C. (2013). Purpose in life and reduced incidence of stroke in older adults: "The Health and Retirement Study." *Journal of Psychosomatic Research*, 74(5), 427–432.
- King, D. A., & Buchwald, A. M. (1982). Sex differences in subclinical depression: Administration of the Beck Depression Inventory in public and private disclosure situations. *Journal of Personality and Social Psychology*, 42(5), 963–969.
- King, L. A., Hicks, J. A., Krull, J. L., & Del Gaiso, A. K. (2006). Positive affect and the experience of meaning in life. *Journal of Personality and Social Psychology*, 90(1), 179–196.
- Kirchner, J. M., Bloom, A. J., & Skutnick-Henley, P. (2008). The relationship between performance anxiety and flow. *Medical Problems of Performing Artists*, 23(2), 59– 65.
- Kirmayer, L. J. (1989). Cultural variations in the response to psychiatric disorders and emotional distress. *Social Science & Medicine*, *29*(3), 327–339.

- Kitayama, S., Duffy, S., Kawamura, T., & Larsen, J. T. (2003). Perceiving an object and its context in different cultures: A cultural look at New Look. *Psychological Science*, 14(3), 201–206.
- Kitayama, S., Karasawa, M., Grossmann, I., Na, J., Varnum, M. E. W., & Nisbett, R. (2019).
  Do cross-cultural psychological differences vary with social class, age, and gender?
  A Japan-U.S. comparison of cognitive style and social orientation. *PsyArXiv*, c57ep.
- Kitayama, S., & Park, J. (2010). Cultural neuroscience of the self: Understanding the social grounding of the brain. *Social Cognitive and Affective Neuroscience*, *5*(2–3), 111–129.
- Kivimaki, M., & Jokinen, M. (1994). Job perceptions and well-being among symphony orchestra musicians: A comparison with other occupational groups. *Medical Problems of Performing Artists*, 9(3), 73–76.
- Kleinman, A. (1988). *Rethinking psychiatry: From cultural category to personal experience*. Free Press, Collier Macmillan.
- Kling, K. C., Seltzer, M. M., & Ryff, C. D. (1997). Distinctive late-life challenges: Implications for coping and well-being. *Psychology and Aging*, *12*(2), 288–295.
- Kobori, O., Yoshie, M., Kudo, K., & Ohtsuki, T. (2011). Traits and cognitions of perfectionism and their relation with coping style, effort, achievement, and performance anxiety in Japanese musicians. *Journal of Anxiety Disorders*, 25(5), 674–679.
- Koenig, H. G., George, L. K., & Siegler, I. C. (1988). The use of religion and other emotionregulating coping strategies among older adults. *The Gerontologist*, 28(3), 303– 310.
- Koizumi, M., Ito, H., Kaneko, Y., & Motohashi, Y. (2008). Effect of having a sense of purpose in life on the risk of death from cardiovascular diseases. *Journal of Epidemiology*, *18*(5), 191–196.
- Kok, L. M., Groenewegen, K. A., Huisstede, B. M. A., Nelissen, R. G. H. H., Rietveld, A. B. M., & Haitjema, S. (2018). The high prevalence of playing-related musculoskeletal disorders (PRMDs) and its associated factors in amateur musicians playing in student orchestras: A cross-sectional study. *PLOS ONE*, *13*(2), e0191772.
- Kok, L. M., Huisstede, B. M. A., Voorn, V. M. A., Schoones, J. W., & Nelissen, R. G. H. H. (2016).
   The occurrence of musculoskeletal complaints among professional musicians: A systematic review. *International Archives of Occupational and Environmental Health*, 89(3), 373–396.
- Kok, L. M., Vlieland, T. P. V., Fiocco, M., & Nelissen, R. G. (2013). A comparative study on the prevalence of musculoskeletal complaints among musicians and nonmusicians. *BMC Musculoskeletal Disorders*, 14(1), 9.
- Kolosnitsyna, M., Khorkina, N., & Dorzhiev, H. (2017). Determinants of life satisfaction in older Russians. *Ageing International*, *42*(3), 354–373.
- Konkolÿ Thege, B., Bachner, Y. G., Martos, T., & Kushnir, T. (2009). Meaning in Life: Does it play a role in smoking? *Substance Use & Misuse*, *44*(11), 1566–1577.
- Kotov, R., Gamez, W., Schmidt, F., & Watson, D. (2010). Linking "big" personality traits to anxiety, depressive, and substance use disorders: A meta-analysis. *Psychological Bulletin*, 136(5), 768–821.
- Kram, K. (1983). Phases of the mentor relationship. *Academy of Management Journal*, *26*(4), 608–625.
- Krause, N. (2004). Stressors arising in highly valued roles, meaning in life, and the physical health status of older adults. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 59(5), S287–S297.
- Krause, N. (2009). Meaning in life and mortality. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 64B(4), 517–527.

- Krause, N., & Shaw, B. A. (2003). Role-specific control, personal meaning, and health in late life. *Research on Aging*, *25*(6), 559–586.
- Kreß, V., Sperth, M., Hofmann, F.-H., & Holm-Hadulla, R. M. (2015). Psychological complaints of students: A comparison of field samples with clients of a counseling service at a typical German University. *Mental Health & Prevention*, 3(1), 41–47.
- Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The PHQ-9: Validity of a brief depression severity measure. *Journal of General Internal Medicine*, *16*(9), 606–613.
- Krog, N. H., Engdahl, B., & Tambs, K. (2010). The association between tinnitus and mental health in a general population sample: Results from the HUNT Study. *Journal of Psychosomatic Research*, 69(3), 289–298.
- Kuehner, C. (2003). Gender differences in unipolar depression: An update of epidemiological findings and possible explanations. *Acta Psychiatrica Scandinavica*, 108(3), 163–174.
- Kuriyama, S., Nakaya, N., Ohmori-Matsuda, K., Shimazu, T., Kikuchi, N., Kakizaki, M., Sone, T., Sato, F., Nagai, M., Sugawara, Y., Akhter, M., Higashiguchi, M., Fukuchi, N., Takahashi, H., Hozawa, A., & Tsuji, I. (2009). Factors associated with psychological distress in a community-dwelling Japanese population: The Ohsaki cohort 2006 study. *Journal of Epidemiology*, *19*(6), 294–302.
- Kwan, C. M. L., Love, G. D., Ryff, C. D., & Essex, M. J. (2003). The role of self-enhancing evaluations in a successful life transition. *Psychology and Aging*, *18*(1), 3–12.
- Kwon, H., Kim, S., & Yang, J. (2018). What makes them dream on?: The influence of social and psychological assets on young musicians' decision to stay in the profession. *Development and Society*, 47(3), 371–400.
- Kyaga, S., Landén, M., Boman, M., Hultman, C. M., Långström, N., & Lichtenstein, P. (2013).
   Mental illness, suicide and creativity: 40-Year prospective total population study.
   *Journal of Psychiatric Research*, 47(1), 83–90.

- Kyaga, S., Lichtenstein, P., Boman, M., Hultman, C., Långström, N., & Landén, M. (2011). Creativity and mental disorder: Family study of 300 000 people with severe mental disorder. *The British Journal of Psychiatry*, 199(5), 373–379.
- Laaksonen, S. (2018). A research note: Happiness by age is more complex than U-shaped. *Journal of Happiness Studies*, *19*, 471–482.
- Lace, J. W., Merz, Z. C., Grant, A. F., Emmert, N. A., Zane, K. L., & Handal, P. J. (2018). Validation of the K6 and its depression and anxiety subscales for detecting nonspecific psychological distress and need for treatment. *Current Psychology*, 39, 1552-1561.
- Lachman, M. E., Röcke, C., Rosnick, C., & Ryff, C. D. (2008). Realism and illusion in Americans' temporal views of their life satisfaction: Age differences in reconstructing the past and anticipating the future. *Psychological Science*, 19(9), 889–897.
- Lahme, A., Eibl, I., & Reichl, F.-X. (2014). Typical musculoskeletal patterns in upper string players with neck and arm problems. *Medical Problems of Performing Artists*, *29*(4), 241–242.
- Laing, R. D. (1971). *The politics of the family and other essays,*. Tavistock Publications.
- Laitinen, H. (2005). Factors affecting the use of hearing protectors among classical music players. *Noise & Health*, *7*(26), 21–29.
- Laitinen, H., & Poulsen, T. (2008). Questionnaire investigation of musicians' use of hearing protectors, self reported hearing disorders, and their experience of their working environment. *International Journal of Audiology*, *47*(4), 160–168.
- Lamers, S. (2012). *Positive mental health: Measurement, relevance and implications*. Unpublished PhD Dissertation, University of Twente.

- Lamers, S. M. A., Westerhof, G. J., Bohlmeijer, E. T., ten Klooster, P. M., & Keyes, C. L. M. (2011). Evaluating the psychometric properties of the Mental Health Continuum-Short Form (MHC-SF). *Journal of Clinical Psychology*, 67(1), 99–110.
- Lampinen, P., Heikkinen, R.-L., Kauppinen, M., & Heikkinen, E. (2006). Activity as a predictor of mental well-being among older adults. *Aging & Mental Health*, 10(5), 454–466.
- Lance, C. E., Butts, M. M., & Michels, L. C. (2006). The sources of four commonly reported cutoff criteria: What did they really say? *Organizational Research Methods*, 9(2), 202–220.
- Larsen, R. J., Diener, E., & Emmons, R. A. (1985). An evaluation of subjective well-being measures. *Social Indicators Research*, *17*(1), 1–17.
- Lazarus, R., & Folkman, S. (1984). *Stress, appraisal, and coping. New York: Springer.* Springer.
- Leach, L., Christensen, H., Mackinnon, A., Windsor, T., & Butterworth, P. (2008). Gender differences in depression and anxiety across the adult lifespan: The role of psychosocial mediators. *Social Psychiatry and Psychiatric Epidemiology*, 43(12), 983–998.
- Leahy, C. M., Peterson, R. F., Wilson, I. G., Newbury, J. W., Tonkin, A. L., & Turnbull, D. (2010). Distress levels and self-reported treatment rates for medicine, law, psychology and mechanical engineering tertiary students: Cross-sectional study. *The Australian and New Zealand Journal of Psychiatry*, 44(7), 608–615.
- Leana, C., Appelbaum, E., & Shevchuk, I. (2009). Work process and quality of care in early childhood education: The role of job crafting. *Academy of Management Journal*, *52*(6), 1169–1192.
- Leaver, R., Harris, E. C., & Palmer, K. T. (2011). Musculoskeletal pain in elite professional musicians from British symphony orchestras. *Occupational Medicine*, 61(8), 549– 555.

- Lederman, R. (2001). Embouchure problems in brass instrumentalists. *Medical Problems of Performing Artists*, *16*, 53–57.
- Lederman, R. (2003). Neuromuscular and musculoskeletal problems in instrumental musicians. *Muscle & Nerve*, *27*, 549–561.
- Lederman, R. J. (2006). Focal peripheral neuropathies in instrumental musicians. *Physical Medicine and Rehabilitation Clinics of North America*, *17*(4), 761–779.
- Lederman, R. J. (2010). The biology of musical performance and performance-related injury. *JAMA*, *303*(10), 987–991.
- Lee, D. S., Ybarra, O., Gonzalez, R., & Ellsworth, P. (2018). I-Through-We: How supportive social relationships facilitate personal growth. *Personality and Social Psychology Bulletin*, 44(1), 37–48.
- Lee, H.-S., Park, H. Y., Yoon, J. O., Kim, J. S., Chun, J. M., Aminata, I. W., Cho, W.-J., & Jeon, I. H. (2013). Musicians' medicine: Musculoskeletal problems in string players. *Clinics in Orthopedic Surgery*, *5*(3), 155–160.
- Lee, J., Behar, A., Kunov, H., & Wong, W. (2005). Musicians' noise exposure in orchestra pit. *Applied Acoustics*, *66*(8), 919–931.
- Leech-Wilkinson, D. (2020). Moral judgement in response to performances of Western art music. In A. Aguilar, E. Clarke, R. Cole, & M. Pritchard (Eds.), *Remixing music studies: Essays in honour of Nicholas Cook* (pp. 91–111). Routledge.
- Leontiev, D. A. (2005). Three facets of meaning. *Journal of Russian and East European Psychology*, 43(6), 45–72.
- Levecque, K., Lodewyckx, I., & Bracke, P. (2009). Psychological distress, depression and generalised anxiety in Turkish and Moroccan immigrants in Belgium: A general population study. *Social Psychiatry and Psychiatric Epidemiology*, 44(3), 188–197.

- Levine, R., & Levine, S. (1996). Why they ' re not smiling: Stress and discontent in the orchestra workplace. *Harmony: Forum of the Symphony Orchestra Institute*, *2*, 14–25.
- Lewinsohn, P. M., Gotlib, I. H., Lewinsohn, M., Seeley, J. R., & Allen, N. B. (1998). Gender differences in anxiety disorders and anxiety symptoms in adolescents. *Journal of Abnormal Psychology*, *107*(1), 109–117.
- Lewis-Beck, M., Bryman, A., & Futing Liao, T. (2004). *The SAGE Encyclopedia of Social Science Research Methods*. Sage Publications, Inc.
- Li, J.-B., Salcuni, S., & Delvecchio, E. (2019). Meaning in life, self-control and psychological distress among adolescents: A cross-national study. *Psychiatry Research*, 272, 122–129.
- Li, N. (2016). Multidimensionality of longitudinal data: Unlocking the age-happiness puzzle. *Social Indicators Research*, *128*(1), 305–320.
- Lilenfeld, L. R. R., Stein, D., Bulik, C. M., Strober, M., Plotnicov, K., Pollice, C., Rao, R., Merikangas, K. R., Nagy, L., & Kaye, W. H. (2000). Personality traits among currently eating disordered, recovered and never ill first-degree female relatives of bulimic and control women. *Psychological Medicine*, *30*(6), 1399–1410.
- Lima, R. C., Pinheiro, T. M. M., Dias, E. C., & de Andrade, E. Q. (2015). Development and prevention of work related disorders in a sample of Brazilian violinists. *Work*, 51(2), 273–280.
- Linley, P. A., Nielsen, K., Wood, A., Gillett, R., & Biswas-Diener, R. (2010). Using signature strengths in pursuit of goals: Effects in goal progress, need satisfaction and wellbeing and implications for coaching psychologists. *International Coaching Psychology Review*, 5(1), 6–15.
- Lips-Wiersma, M., & Morris, L. (2009). Discriminating between 'meaningful work' and the 'management of meaning.' *Journal of Business Ethics*, *88*(3), 491–511.

- Lips-Wiersma, M., & Wright, S. (2012). Measuring the meaning of meaningful work development and validation of the comprehensive Meaningful Work Scale (CMWS). *Group & Organization Management*, *37*(5), 655–685.
- Liu, S., & Gan, Y. (2010). Reliability and validity of the Chinese version of the Meaning in Life Questionnaire. *Chinese Mental Health Journal*, *24*(6), 478–482.
- Lopez, S. J., & Gallagher, M. W. (2009). A case for positive psychology. In S. J, Lopez & C. R. Snyder (Eds.), *The Oxford handbook of positive psychology* (pp. 3-6). Oxford University Press.
- López Ulloa, B. F., Møller, V., & Sousa-Poza, A. (2013). How does subjective well-being evolve with age? A literature review. *Journal of Population Ageing*, 6(3), 227–246.
- Low, G., & Molzahn, A. E. (2007). Predictors of quality of life in old age: A cross-validation study. *Research in Nursing & Health*, *30*(2), 141–150.
- Lucas, R. E., Diener, E., & Suh, E. (1996). Discriminant validity of well-being measures. *Journal of Personality and Social Psychology*, 71(3), 616–628.
- Ludwig, A. M. (1992). Creative achievement and psychopathology: Comparison among professions. *American Journal of Psychotherapy*, *46*(3), 330–356.
- Ludwig, A. M. (1994). Mental illness and creative activity in female writers. The American Journal of Psychiatry, 151(11), 1650-1656.
- Lyons, P. (2008). The crafting of jobs and individual differences. *Journal of Business and Psychology*, *23*(1), 25–36.
- Lyubomirsky, S., Sheldon, K. M., & Schkade, D. (2005). Pursuing happiness: The architecture of sustainable change: *Review of General Psychology*, *9*(2), 111-131.
- Macaskill, A. (2013). The mental health of university students in the United Kingdom. *British Journal of Guidance & Counselling*, 41(4), 426–441.

- MacDonald, R., Byrne, C., and Carlton, L. (2006). Creativity and flow in musical composition: an empirical investigation. *Psychology of Music*, 34, 292–306.
- MacDonald, R., Kreutz, G., & Mitchell, L. (Eds.). (2012). Music, Health, and Wellbeing. OUP.
- Machado, W., & Bandeira, D. (2015). Positive mental health scale: Validation of the Mental Health Continuum Short Form. *Psico-USF*, *20*, 259–274.
- MacNamara, A., Holmes, P., & Collins, D. (2008). Negotiating transitions in musical development: The role of psychological characteristics of developing excellence. *Psychology of Music*, 36(3), 335–352.
- Maddux, J. E. (2009). Stopping the "madness": Positive psychology and deconstructing the illness ideology and the DSM. In S. J. Lopez & C. R. Snyder (Eds.), *Oxford handbook of positive psychology, 2nd ed* (pp. 61–69). Oxford University Press.
- Maffei, L., Iannace, G., & Masullo, M. (2011). Noise exposure of physical education and music teachers. *Noise & Vibration Worldwide*, *42*(1), 9–16.
- Magnus, K., Diener, E., Fujita, F., & Pavot, W. (1993). Extraversion and neuroticism as predictors of objective life events: A longitudinal analysis. *Journal of Personality and Social Psychology*, *65*(5), 1046–1053.
- Manchester, A., & Flieder, D. (1991). Further observations on the epidemiology of hand injuries in music students. *Medical Problems of Performing Artists*, *6*, 11–14.
- Manchester, R. A. (1988). The incidence of hand problems in music students. *Medical Problems of Performing Artists*, *3*(1), 15–18.
- Manchester, R. A. (2006). Toward better prevention of injuries among performing artists. *Medical Problems of Performing Artists*, *21*(1), 1–3.
- Manchester, R. A. (2009). Looking at musicians' health through the "ages." *Medical Problems of Performing Artists*, *24*(2), 55–57.
- Manchester, R. A., & Lustik, S. (1989). The short-term outcome of hand problems in music students. *Medical Problems of Performing Artists*, *4*(2), 95–96.

- Marchand, A., Demers, A., & Durand, P. (2005). Do occupation and work conditions really matter? A longitudinal analysis of psychological distress experiences among Canadian workers. *Sociology of Health and Illness*, *27*(5), 602–627.
- Marchant-Haycox, S. E., & Wilson, G. D. (1992). Personality and stress in performing artists. *Personality and Individual Differences*, *13*(10), 1061–1068.
- Marks, N., & Lambert, J. (1998). Marital status continuity and change among young and midlife adults: Longitudinal effects on psychological well-being. *Journal of Family Issues*, *19*(6), 652–686.
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, *98*(2), 224–253.
- Marin, M. M., and Bhattacharya, J. (2013). Getting into the musical zone: trait emotional intelligence and amount of practice predict flow in pianists. *Frontiers in Psychology*, 4:853.
- Marmor, M. F. (2010). Ophthalmology and the performing artist. In Sataloff, R.T., Brandfonbrener, A.G. & Lederman, R.J. (Eds.). *Performing arts medicine 3rd ed.* (pp 77-86). Science and Medicine.
- Marmot, M., Ryff, C. D., Bumpass, L. L., Shipley, M., & Marks, N. F. (1997). Social inequalities in health: Next questions and converging evidence. *Social Science & Medicine (1982)*, *44*(6), 901–910.
- Martela, F., & Steger, M. F. (2016). The three meanings of meaning in life: Distinguishing coherence, purpose, and significance. *The Journal of Positive Psychology*, *11*(5), 531–545.
- Martin, L. G., Schoeni, R. F., & Andreski, P. M. (2010). Trends in health of older adults in the United States: Past, present, future. *Demography*, *47 Suppl*, S17-40.
- Martin-Gagnon, G., & Creech, A. (2019). Cool jazz: Music performance anxiety in jazz performance students. *Music Education Research*, *21*(4), 414–425.

- Maser, B., Danilewitz, M., Guérin, E., Findlay, L., & Frank, E. (2019). Medical student psychological distress and mental illness relative to the general population: A Canadian cross-sectional survey. *Academic Medicine*, *94*(11), 1781–1791.
- Maslow, A. (1954). Motivation and personality. Harpers.
- Maslow, A. (1968). Toward a psychology of being. D. Van Nostrand Company.
- May, D. R., Gilson, R. L., & Harter, L. M. (2004). The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work. *Journal of Occupational and Organizational Psychology*, 77(1), 11–37.
- McCready, S., & Reid, D. (2007). The experience of occupational disruption among student musicians. *Medical Problems of Performing Artists*, *22*(4), 140–146.
- McDaniel, C., & Keyes, C. (2013). The virtuous business cycle model: A proposal. In R. Giacalone & M. Promislo (Eds.), *Handbook of unethical work behavior: Implications for individual well-being* (pp. 287–298). Routledge.
- McDonough, P., & Strohschein, L. (2003). Age and the gender gap in distress. *Women & Health*, *38*(1), 1–20.
- McKnight, P. E., & Kashdan, T. B. (2009). Purpose in life as a system that creates and sustains health and well-being: An integrative, testable theory. *Review of General Psychology*, *13*(3), 242–251.
- McVeigh, K. H., Galea, S., Thorpe, L. E., Maulsby, C., Henning, K., & Sederer, L. I. (2006). The epidemiology of nonspecific psychological distress in New York City, 2002 and 2003. *Journal of Urban Health*, *83*(3), 394–405.
- Means-Christensen, A. J., Sherbourne, C. D., Roy-Byrne, P. P., Craske, M. G., & Stein, M. B. (2006). Using five questions to screen for five common mental disorders in primary care: Diagnostic accuracy of the Anxiety and Depression Detector. *General Hospital Psychiatry*, 28(2), 108–118.

- Mehlsen, M., Platz, M., & Fromholt, P. (2003). Life satisfaction across the life course: Evaluations of the most and least satisfying decades of life. *The International Journal of Aging and Human Development*, *57*(3), 217–236.
- Mehrparvar, A. H., Mostaghaci, M., & Gerami, R. F. (2012). Musculoskeletal disorders among iranian instrumentalists. *Medical Problems of Performing Artists*, 27(4), 193–196.
- Meidell, K. L. (2011). *Epidemiological evaluation of pain among string instrumentalists.* Unpublished doctoral dissertation, University of North Texas.
- Melton, A. M. A., & Schulenberg, S. E. (2008). On the measurement of meaning: Logotherapy's empirical contributions to humanistic psychology. *The Humanistic Psychologist*, 36(1), 31–44.
- Merritt, L., Richards, A., & Davis, P. (2001). Performance anxiety: Loss of the spoken edge. *Journal of Voice*, *15*(2), 257–269.
- Michaelson, C., Pratt, M. G., Grant, A. M., & Dunn, C. P. (2014). Meaningful work: Connecting business ethics and organization studies. *Journal of Business Ethics*, *121*(1), 77–90.
- Middlestadt, S. E. (1990). Medical problems of symphony orchestra musicians: From counting people with problems to evaluating interventions. *Revista Interamericana de Psicología = Interamerican Journal of Psychology*, 24(2), 159–172.
- Middlestadt, S. E., & Fishbein, M. (1988). Health and occupational correlates of perceived occupational stress in symphony orchestra musicians. *Journal of Occupational Medicine*, *30*(9), 687–692.
- Minhas, G. (2010). Developing realised and unrealised strengths: Implications for engagement, self-esteem, life satisfaction and well-being. *Assessment and Development Matters*, 2(1), 12.

- Mirowsky, J., & Ross, C. E. (2007). Creative work and health. *Journal of Health and Social Behavior*, 48(4), 385–403.
- Mitchell, C. M., & Beals, J. (2011). The utility of the Kessler Screening Scale for Psychological Distress (K6) in two American Indian communities. *Psychological Assessment*, 23(3), 752–761.
- Mohr, F., & Schaeffer, E. (1996). *My life with the great pianists* (2nd ed). Baker Books.
- Mojtabai, R., & Jorm, A. F. (2015). Trends in psychological distress, depressive episodes and mental health treatment-seeking in the United States: 2001-2012. *Journal of Affective Disorders*, *174*, 556–561.
- Mor, S., Day, H. I., Flett, G. L., & Hewitt, P. L. (1995). Perfectionism, control, and components of performance anxiety in professional artists. *Cognitive Therapy and Research*, 19(2), 207–225.
- Morgan, J., & Farsides, T. (2009). Measuring meaning in life. *Journal of Happiness Studies: An Interdisciplinary Forum on Subjective Well-Being*, *10*(2), 197–214.
- Morgan, J., & Robinson, O. (2013). Intrinsic aspirations and personal meaning across adulthood: Conceptual interrelations and age/sex differences. *Developmental Psychology*, *49*(5), 999–1010.
- Morgan, J., Robinson, O., & Thompson, T. (2015). Happiness and age in European adults: The moderating role of gross domestic product per capita. *Psychology and Aging*, *30*(3), 544–551.
- Morse, T., Ro, J., Cherniack, M., & Pelletier, S. R. (2000). A pilot population study of musculoskeletal disorders in musicians. *Medical Problems of Performing Artists*, 15(2), 81–85.
- Moum, T. (1998). Mode of administration and interviewer effects in self-reported symptoms of anxiety and depression. *Social Indicators Research*, *45*(1), 279–318.

MOW International Research Team. (1987). The meaning of working. Academic Press.

- Mroczek, D. K., & Kolarz, C. M. (1998). The effect of age on positive and negative affect: A developmental perspective on happiness. *Journal of Personality and Social Psychology*, 75(5), 1333–1349.
- Mula, M., & Trimble, M. R. (2009). Music and madness: Neuropsychiatric aspects of music. *Clinical Medicine*, 9(1), 83–86.
- Myklestad, I., Røysamb, E., & Tambs, K. (2012). Risk and protective factors for psychological distress among adolescents: A family study in the Nord-Trøndelag Health Study. *Social Psychiatry and Psychiatric Epidemiology*, *47*(5), 771–782.

National Institute of Aging. (2011). Global health and aging. World Health Organization.

- Near, J., Smith, C., Rice, R., & Hunt, R. (1984). A comparison of work and nonwork predictors of life satisfaction. *Academy of Management Journal*, *27*, 184–190.
- Needham, B. L. (2007). Gender differences in trajectories of depressive symptomatology and substance use during the transition from adolescence to young adulthood. *Social Science & Medicine*, 65(6), 1166–1179.
- Neto, F. (1993). The satisfaction with life scale: Psychometrics properties in an adolescent sample. *Journal of Youth and Adolescence*, *22*(2), 125–134.
- Neugarten, B. (1973). Personality change in late life: A developmental perspective. In C. Eisodorfer & M. Lawton (Eds.), *The psychology of adult development and aging* (pp. 311–335). American Psychological Association.
- NHS. (2021). Greater Manchester Universities Student Mental Health Service Service Information. Retrieved from https://www.gmmh.nhs.uk
- NIHS. (2020). *National Health Interview Survey data*. Centers for Disease Control and Prevention, National Center for Health Statistics.
- Nisbett, R., Peng, K., Choi, I., & Norenzayan, A. (2001). Culture and systems of thought: Holistic versus analytic cognition. *Psychological Review*, *108*(2), 291–310.

- Nishi, D., Susukida, R., Usuda, K., Mojtabai, R., & Yamanouchi, Y. (2018). Trends in the prevalence of psychological distress and the use of mental health services from 2007 to 2016 in Japan. *Journal of Affective Disorders*, *239*, 208–213.
- Nunnally, J., & Bernstein, I. (1994). Psychometric theory (3rd ed.). McGraw-Hill.
- Nusseck, M., Mornell, A., Voltmer, E., Kötter, T., Schmid, B., Blum, J., Türk-Espitalier, A., & Spahn, C. (2017). Gesundheit und präventionsverhalten von musikstudierenden an verschiedenen deutschen musikhochschulen. *Fachzeitschrift Musikphysiologie Und Musikermedizin*, *24*(2), 67–84.
- Oakland, J., MacDonald, R., & Flowers, P. (2014). Musical disembodiment: A phenomenological case study investigating the experiences of operatic career disruption due to physical incapacity. *Research Studies in Music Education*, *36*(1), 39–55.
- Oakley Browne, M. A., Wells, J. E., Scott, K. M., McGee, M. A., & New Zealand Mental Health Survey Research Team. (2010). The Kessler Psychological Distress Scale in Te Rau Hinengaro: The New Zealand Mental Health Survey. *The Australian and New Zealand Journal of Psychiatry*, 44(4), 314–322.
- O'Brien, I., Driscoll, T., & Ackermann, B. (2013). Sound exposure of professional orchestral musicians during solitary practice. *The Journal of the Acoustical Society of America*, *134*(4), 2748–2754.
- Office for National Statistics (2011). Guidance for questions on sex, gender identity and sexual orientation for the 2019 Census. Retrieved from https://www.ons.gov.uk/census/censustransformationprogramme/questiondev elopment
- Oishi, S. (2006). The concept of life satisfaction across cultures: An IRT analysis. *Journal of Research in Personality*, *40*, 411–423.

- Oishi, S., & Schimmack, U. (2010). Culture and well-being: A new inquiry into the psychological wealth of nations. *Perspectives on Psychological Science*, *5*(4), 463–471.
- Olaroiu, M., Alexa, I. D., & van den Heuvel, W. J. A. (2017). Do changes in welfare and health policy affect life satisfaction of older citizens in Europe? *Current Gerontology and Geriatrics Research*, 2017, 7574040.
- Olivier, A., & Rothmann, S. (2007). Antecedents of work engagement in a multinational oil company. *South African Journal of Industrial Psychology*, *33*(3), 49–56.
- Olson, A. D., Gooding, L. F., Shikoh, F., & Graf, J. (2016). Hearing health in college instrumental musicians and prevention of hearing loss. *Medical Problems of Performing Artists*, *31*(1), 29–36.
- O'Neill, S. (1999). Flow theory and the development of musical performance skills. *Bulletin of the Council for Research in Music Education, 141*, 129–134.
- O'Neill, S. (2002). The self-identity of young musicians. In Hargreaves, D. J. *Musical Identities* (pp. 79-96). Oxford University Press.
- Osborne, M., & Franklin, J. (2002). Cognitive processes in music performance anxiety. *Australian Journal of Psychology*, *54*, 86–93.
- Osborne, M. S. (1998). *Determining the diagnostic and theoretical adequacy of conceptualising music performance anxiety as a social phobia*. Unpublished Honours Thesis. Macquarie University, Sydney, Australia.
- Ostwald, P. F., Baron, B. C., Byl, N. M., & Wilson, F. R. (1994). Performing arts medicine. *The Western Journal of Medicine*, *160*(1), 48–52.
- Paarup, H. M., Baelum, J., Holm, J. W., Manniche, C., & Wedderkopp, N. (2011). Prevalence and consequences of musculoskeletal symptoms in symphony orchestra musicians vary by gender: A cross-sectional study. *BMC Musculoskeletal Disorders*, 12(1), 223.

- Pahwa, P., & Karunanayake, C. P. (2009). Modeling of longitudinal polytomous outcome from complex survey data—Application to investigate an association between mental distress and non-malignant respiratory diseases. *BMC Medical Research Methodology*, 9(1), 84.
- Pancheva, M. G., Ryff, C. D., & Lucchini, M. (2020). An integrated look at well-being: topological clustering of combinations and correlates of hedonia and eudaimonia. *Journal of Happiness Studies*, 22:2275-2297.
- Papageorgi, I., Creech, A., Welch, G. (2011). Perceived performance anxiety in advanced musicians specializing in different musical genres, *Psychology of Music*, 41(1), 18–41.
- Parasuraman, S., & Purohit, Y. S. (2000). Distress and boredom among orchestra musicians: The two faces of stress. *Journal of Occupational Health Psychology*, 5(1), 74–83.
- Park, C. L. (2007). Religiousness/spirituality and health: A meaning systems perspective. *Journal of Behavioral Medicine*, *30*(4), 319–328.
- Park, C. L. (2010). Making sense of the meaning literature: An integrative review of meaning making and its effects on adjustment to stressful life events. *Psychological Bulletin*, 136(2), 257–301.
- Park, N., Park, M., & Peterson, C. (2010). When is the search for meaning related to life satisfaction? *Applied Psychology: Health and Well-Being*, *2*(1), 1–13.
- Park, N., & Peterson, C. (2006). Moral competence and character strengths among adolescents: The development and validation of the Values in Action Inventory of Strengths for Youth. *Journal of Adolescence*, 29(6), 891–909.
- Parker, G., & Hadzi-Pavlovic, D. (2004). Is the female preponderance in major depression secondary to a gender difference in specific anxiety disorders? *Psychological Medicine*, 34(3), 461–470.

- Parks, A. C., & Biswas-Diener, R. (2013). Positive interventions: Past, present, and future.
  In B. Kashdan & J. Ciarrochi (Eds.), *Mindfulness, acceptance, and positive psychology: The seven foundations of well-being* (pp. 140–165). New Harbinger Publications, Inc.
- Parks, A. C., & Layous, K. (2016). Positive psychological interventions. In Norcross, J. C., VancerBos, G. R. & Freedheim, D. K. (Eds.). APA handbook of clinical psychology: Applications and methods, Vol. 3 (pp. 439–449). American Psychological Association.
- Parks, A. C., & Schuller, S. (Eds.). (2014). *The Wiley-Blackwell handbook of positive psychological interventions*. Wiley Blackwell.
- Parry, C. B. W. (2003). The musician's hand. *Hand Clinics*, 19(2), 211–213.
- Parry, W. (2004). Managing the physical demands of musical performance. In Williamon, Aaron (Ed.), *Music excellence. Strategies and techniques to enhance performance* (pp. 41–60). OUP.
- Patel, V., Araya, R., Chowdhary, N., King, M., Kirkwood, B., Nayak, S., Simon, G., & Weiss, H.
  A. (2008). Detecting common mental disorders in primary care in India: A comparison of five screening questionnaires. *Psychological Medicine*, *38*(2), 221–228.
- Paterniti, S., Niedhammer, I., Lang, T., & Consoli, S. (2002). Psychosocial factors at work, personality traits and depressive symptoms: Longitudinal results from the GAZEL Study. *The British Journal of Psychiatry : The Journal of Mental Science*, 181(2), 111–117.
- Patston, T., & Osborne, M. S. (2016). The developmental features of music performance anxiety and perfectionism in school age music students. *Performance Enhancement & Health*, *4*(1), 42–49.

- Patston, T., & Waters, L. (2015). Positive instruction in music studios: Introducing a new model for teaching studio music in schools based upon Positive Psychology. *Psychology of Well-Being*, 5(1), 10.
- Paul, C., Ayis, S., & Ebrahim, S. (2006). Psychological distress, loneliness and disability in old age. *Psychology, Health & Medicine*, *11*(2), 221–232.
- Pavot, W., & Diener, E. (1993a). Review of the Satisfaction With Life Scale. *Psychological Assessment*, *5*(2), 164–172.
- Pavot, W., & Diener, E. (1993b). The affective and cognitive context of self-reported measures of subjective well-being. *Social Indicators Research*, *28*(1), 1–20.
- Pavot, W., & Diener, E. (2008). The Satisfaction With Life Scale and the emerging construct of life satisfaction. *The Journal of Positive Psychology*, *3*(2), 137–152.
- Pavot, W., & Diener, E. (2009). Review of the Satisfaction With Life Scale. In E. Diener (Ed.), *Assessing Well-Being* (Vol. 39, pp. 101–117). Springer Netherlands.
- Pavot, W., & Diener, E. (2013). Happiness experienced: The science of subjective wellbeing. In S. David, I. Boniwell, & A. C. Ayers (Eds.), *Oxford Handbook of Happiness* (pp. 134–151). OUP Oxford.
- Pavot, W., Diener, E., Colvin, C. R., & Sandvik, E. (1991). Further validation of the Satisfaction with Life Scale: Evidence for the cross-method convergence of wellbeing measures. *Journal of Personality Assessment*, 57(1), 149–161.
- Perkins, R. (2013). Hierarchies and learning in the conservatoire: Exploring what students learn through the lens of Bourdieu. *Research Studies in Music Education*, *35*(2), 197–212.
- Perkins, R., Reid, H., Araújo, L. S., Clark, T., & Williamon, A. (2017). Perceived enablers and barriers to optimal health among music students: A qualitative study in the music conservatoire setting. *Frontiers in Psychology*, *8*, 968.

- Perkins, R., & Williamon, A. (2013). Learning to make music in older adulthood: A mixedmethods exploration of impacts on wellbeing. *Psychology of Music*, *42*, 550–567.
- Peterson, C., & Park, N. (2004). *Character strengths and virtues: A handbook and classification*. Oxford University Press.
- Peterson, C., & Park, N. (2009). Classifying and measuring strengths of character. In *Oxford handbook of positive psychology, 2nd ed* (pp. 25–33). Oxford University Press.
- Peterson, C., Stephens, J. P., Park, N., Lee, F., & Seligman, M. E. P. (2010). Strengths of character and work. In *Oxford handbook of positive psychology and work* (pp. 221–231). Oxford University Press.
- Petrillo, G., Capone, V., Caso, D., & Keyes, C. L. M. (2015). The Mental Health Continuum– Short Form (MHC–SF) as a measure of well-being in the Italian context. *Social Indicators Research*, *121*(1), 291–312.
- Pevalin, D. (2000). Multiple applications of the GHQ-12 in a general population sample: An investigation of long-term retest effects. *Social Psychiatry and Psychiatric Epidemiology*, *35*(11), 508–512.
- Phillips, S. L., & Mace, S. (2008). Sound level measurements in music practice rooms. *Music Performance Research*, *2*, 36–47.
- Phongsavan, P., Chey, T., Bauman, A., Brooks, R., & Silove, D. (2006). Social capital, socioeconomic status and psychological distress among Australian adults. *Social Science & Medicine (1982)*, 63(10), 2546–2561.
- Piątkowska, K., Wnuk, B., Blicharska, I., Rychlik, M., & Durmala, J. (2016). Cervical pain in young professional musicians—Quality of life. *Ortopedia Traumatologia Rehabilitacja*, 18, 21–29.
- Piccinelli, M., & Wilkinson, G. (2000). Gender differences in depression: Critical review. *British Journal of Psychiatry*, 177(6), 486–492.

- Piccolo, R. F., & Colquitt, J. A. (2006). Transformational leadership and job behaviors: The mediating role of core job characteristics. *Academy of Management Journal*, 49(2), 327–340.
- Pinquart, M. (2002). Creating and maintaining purpose in life in old age: A meta-analysis. *Ageing International*, *27*(2), 90–114.
- Piperek, M. (1981). Psychological stress and strain factors in the work of a symphony orchestra musician: Contributing to a job profile for orchestra musicians. In M. Piperek (Ed.), *Stress and music* (pp. 3–14). Wilhelm Braumuller.
- Post, F. (1994). Creativity and psychopathology. A study of 291 world-famous men. *The British Journal of Psychiatry : The Journal of Mental Science*, *165*(1), 22-34.
- Pratt, L. A, & Dey, A. N. (2007). Characteristics of adults with serious psychological distress as measured by the K6 scale, United States, 2001-04. Hyattsville, Md.: U.S. Dept. of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics.
- Pratt, M. G., & Ashford, B. E. (2003). Fostering meaningfulness in working and at work. In
   K. S. Cameron, J. E. Dutton, & R. E. Quinn (Eds.), *Positive Organizational Scholarship: Foundations of a New Discipline* (pp. 309–327). Berret-Koehler.
- Prause, J., & Dooley, D. (2001). Favourable employment status change and psychological depression: A two-year follow-up analysis of the National Longitudinal Survey of Youth. *Applied Psychology*, *50*(2), 282–304.
- Proctor, C. L., Maltby, J. & Linley, P. A. (2011). Strengths use as a predictor of well-being and health-related Quality of Life, *Journal of Happiness Studies*, 12, 153-169.
- Pruchno, R. A., & Hayden, J. M. (2000). Interview modality: Effects on costs and data quality in a sample of older women. *Journal of Aging and Health*, *12*(1), 3–24.

- Purvanova, R., Bono, J., & Dzieweczynski, J. (2006). Transformational leadership, job characteristics, and organizational citizenship performance. *Human Performance*, *19*(1), 1–22.
- Putnam, R. D. (2000). *Bowling alone: The collapse and revival of American community*. Simon & Schuster.
- Quintanilla, S. A. R., & Wilpert, B. (1991). Are work meanings changing? *European Work and Organizational Psychologist*, *1*(2–3), 91–109.
- Raeburn, S. D. (1987). Occupational stress and coping in a sample of professional rock musicians (first of two parts). *Medical Problems of Performing Artists*, *2*(2), 41–48.
- Raeburn, S. D., Hipple, J., Delaney, W., & Chesky, K. (2003). Surveying popular musicians' health status using convenience samples. *Medical Problems of Performing Artists*, *18*(3), 113–119.
- Ragins, B. R., & Verbos, A. K. (2007). Positive relationships in action: Relational mentoring and mentoring schemas in the workplace. In J. Dutton & B. R. Ragins (Eds.), *Exploring positive relationships at work: Building a theoretical and research foundation* (pp. 91–116). Lawrence Erlbaum Associates Publishers.
- Ranelli, S., Straker, L., & Smith, A. (2008). Prevalence of playing-related musculoskeletal symptoms and disorders in children learning instrumental music. *Medical Problems of Performing Artists*, 23, 178–185.
- Rauch, J. (2018). The U-shape of happiness. St. Martin's Press.
- Raymond, D. M., Romeo, J. H., & Kumke, K. V. (2012). A pilot study of occupational injury and illness experienced by classical musicians. *Workplace Health & Safety*, 60(1), 19–24.
- Reavley, N. J., Jorm, A. F., Cvetkovski, S., & Mackinnon, A. J. (2011). National depression and anxiety indices for Australia. *The Australian and New Zealand Journal of Psychiatry*, 45(9), 780–787.

- Reiss, S., Peterson, R. A., Gursky, D. M., & McNally, R. J. (1986). Anxiety sensitivity, anxiety frequency and the prediction of fearfulness. *Behaviour Research and Therapy*, 24(1), 1–8.
- Reker, G. T. (2005). Meaning in life of young, middle-aged, and older adults: Factorial validity, age, and gender invariance of the Personal Meaning Index (PMI). *Personality and Individual Differences*, 38(1), 71–85.
- Reker, G. T., & Peacock, E. J. (1981). The Life Attitude Profile (LAP): A multidimensional instrument for assessing attitudes toward life. *Canadian Journal of Behavioural Science/Revue Canadienne Des Sciences Du Comportement*, 13(3), 264–273.
- Reker, G. T., & Wong, P. T. P. (1988). Aging as an individual process: Toward a theory of personal meaning. In J. Birren & L. Bengtson (Eds.), *Emergent theories of aging* (pp. 214–246). Springer Publishing Company.
- Rice, K. G., Richardson, C. M. E., & Clark, D. (2012). Perfectionism, procrastination, and psychological distress. *Journal of Counseling Psychology*, *59*(2), 288–302.
- Richards, R., Kinney, D. K., Lunde, I., Benet, M., & Merzel, A. P. C. (1988). Creativity in manic-depressives, cyclothymes, their normal relatives, and control subjects. *Journal of Abnormal Psychology*, 97(3), 281–288.
- Rickert, D. L., Barrett, M. S., & Ackermann, B. J. (2013). Injury and the orchestral environment: Part I: The role of work organisation and psychosocial factors in injury risk. *Medical Problems of Performing Artists*, *28*(4), 219–229.
- Rickert, D. L., Barrett, M. S., & Ackermann, B. J. (2014a). Injury and the orchestral environment: Part II. Organisational culture, behavioural norms, and attitudes to injury. *Medical Problems of Performing Artists*, *29*(2), 94–101.
- Rickert, D. L., Barrett, M.S., Ackermann, B.J. (2014b). Injury and the orchestral environment: Part III. The role of psychosocial factors in the experience of musicians undertaking rehabilitation. *Medical Problems Performing Artists*. 29(3), 125-135.

- Ridner, S. H. (2004). Psychological distress: Concept analysis. *Journal of Advanced Nursing*, *45*(5), 536–545.
- Rietveld, A. B. M. B. (2013). Dancers' and musicians' injuries. *Clinical Rheumatology*, *32*(4), 425–434.
- Rietveld, A. B. M., & Leijnse, J. N. a. L. (2013). Focal hand dystonia in musicians: A synopsis. *Clinical Rheumatology*, *32*(4), 481–486.
- Riley, M. W., Kahn, R. L., Foner, A., & Mack, K. A. (Eds.). (1994). Age and structural lag: Society's failure to provide meaningful opportunities in work, family, and leisure (pp. xiv, 290). John Wiley & Sons.
- Ritsner, M., Ponizovsky, A., & Ginath, Y. (1999). The effect of age on gender differences in the psychological distress rating of immigrants. *Stress Medicine*, *15*(1), 17–25.
- Roberson, L. (1990). Functions of work meanings in organizations: Work meanings and work motivation. In A. Brief & W. Nord (Eds.), *Meanings of occupational work: A collection of essays* (pp. 107–134). Lexington Books/D. C. Heath and Com.
- Robins, L., & Reiger, D. (1991). *Psychiatric disorders in America: The epidemiological catchment area study*. Free Press.
- Robitaille, J., Tousignant-Laflamme, Y., & Guay, M. (2018). Impact of changes in playing time on playing-related musculoskeletal pain in string music students. *Medical Problems of Performing Artists*, *33*(1), 6–13.
- Robitschek, C., & Keyes, C. L. M. (2009). Keyes's model of mental health with personal growth initiative as a parsimonious predictor. *Journal of Counseling Psychology*, *56*(2), 321–329.
- Robson, K. E., & Kenny, D. T. (2017). Music performance anxiety in ensemble rehearsals and concerts: A comparison of music and non-music major undergraduate musicians. *Psychology of Music*, 45(6), 868–885.

- Röcke, C., & Lachman, M. E. (2008). Perceived trajectories of life satisfaction across past, present, and future: Profiles and correlates of subjective change in young, middle-aged, and older adults. *Psychology and Aging*, *23*(4), 833–847.
- Rodell, J. B. (2013). Finding meaning through volunteering: Why do employees volunteer and what does it mean for their jobs? *Academy of Management Journal*, *56*(5), 1274–1294.
- Rodrigues, A.L., Vidal, P. & Irigaray, H. A. R. (2016). *Dead without burial: A study about making and losing meaning of work through the role of the maestro for classical musicians*. Paper presented at the European group of Organization Studies Conference, July 2016, Naples, Italy
- Rodríguez Lozano, F. J., Sáez-Yuguero, M., & Bermejo-Fenoll, A. (2011). Orofacial problems in musicians: A review of the literature. *Medical Problems of Performing Artists*, *26*, 150–156.
- Rogers, C. (1961). *On becoming a person: A therapist's view of psychotherapy*. Houghton Mifflin.
- Rosenbaum, A. J., Leonard, G., Mulligan, M., & Uhl, R. L. (2015). Nerve entrapments in musicians. In R. S. Tubbs, E. Rizk, M. M. Shoja, M. Loukas, N. Barbaro, & R. J. Spinner (Eds.), *Nerves and Nerve Injuries* (pp. 665–675). Academic Press.
- Rosenbaum, A. J., Vanderzanden, J., Morse, A. S., & Uhl, R. L. (2012). Injuries complicating musical practice and performance: The hand surgeon's approach to the musicianpatient. *The Journal of Hand Surgery*, *37*(6), 1269–1272.
- Rosenfield, S., & Mouzon, D. (2013). Gender and mental health. In C. S. Aneshensel, J. C.
  Phelan, & A. Bierman (Eds.), *Handbook of the sociology of mental health* (pp. 277–296). Springer Netherlands.
- Rosset, J., Rosines, D., & Saló-Orfila, J. (2000). Identification of risk factors for musicians in Catalonia (Spain). *Medical Problems of Performing Artists*, *15*, 167–174.

- Rosso, B. D., Dekas, K. H., & Wrzesniewski, A. (2010). On the meaning of work: A theoretical integration and review. *Research in Organizational Behavior*, *30*, 91–127.
- Rotter, G., Noeres, K., Fernholz, I., Willich, S. N., Schmidt, A., & Berghöfer, A. (2020). Musculoskeletal disorders and complaints in professional musicians: A systematic review of prevalence, risk factors, and clinical treatment effects. *International Archives of Occupational and Environmental Health*, 93(2), 149–187.
- Royal College of Psychiatrists. (2003). *The mental health of students in higher education. Council report CR112*. Royal College of Psychiatrists.
- Royal College of Psychiatrists. (2011). *The mental health of students in higher education. Council report CR166*. Royal College of Psychiatrists.
- Russell, B. (1930). The conquest of happiness. Allen and Unwin.
- Russell, J. A. (2006). Building curriculum-based concerts. *Music Educators Journal*, *92*(3), 34–39.
- Russell, J. A., & Benedetto, R. L. (2014). Perceived musculoskeletal discomfort among elementary, middle, and high school string players. *Journal of Research in Music Education*, 62(3), 259–276.
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, *57*(6), 1069–1081.
- Ryff, C. D. (1991). Possible selves in adulthood and old age: A tale of shifting horizons. *Psychology and Aging*, *6*(2), 286–295.
- Ryff, C. D. (2014). Psychological well-being revisited: Advances in the science and practice of eudaimonia. *Psychotherapy and Psychosomatics*, *83*(1), 10–28.
- Ryff, C. D. (2017). Eudaimonic well-being, inequality, and health: Recent findings and future directions. *International Review of Economics*, 64(2), 159–178.

- Ryff, C. D. (2018). Eudaimonic well-being. In K. Shigemasu, S. Kuwano, T. Sato & T. Matsuzawa (Eds.), *Diversity in Harmony Insights from Psychology* (pp. 375–395). John Wiley & Sons, Ltd.
- Ryff, C. D. (2019a). *Linking education in the arts and humanities to life-long well-being and health*. The Andrew W. Mellon Foundation.
- Ryff, C. D. (2019b). Entrepreneurship and eudaimonic well-being: Five venues for new science. *Journal of Business Venturing*, *34*(4), 646–663.
- Ryff, C. D., Keyes, C. L., & Hughes, D. (2004). Psychological well-being in MIDUS: Profiles of ethnic/racial diversity and life-course uniformity. In O. Brim, C. D. Ryff, & R. Kessler (Eds.), *How healthy are we?: A national study of well-being at midlife* (pp. 398–422). University of Chicago Press.
- Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology*, 69(4), 719–727.
- Ryff, C. D., & Singer, B. (1996). Psychological well-being: Meaning, measurement, and implications for psychotherapy research. *Psychotherapy and Psychosomatics*, 65(1), 14–23.
- Ryff, C. D., & Singer, B. (2000). Interpersonal flourishing: A positive health agenda for the new millennium. *Personality and Social Psychology Review*, *4*(1), 30–44.
- Ryff, C. D., & Singer, B. H. (2006). Best news yet on the six-factor model of well-being. *Social Science Research*, *35*(4), 1103–1119.
- Ryff, C. D., & Singer, B. H. (2008). Know thyself and become what you are: A eudaimonic approach to psychological well-being. *Journal of Happiness Studies: An Interdisciplinary Forum on Subjective Well-Being*, 9(1), 13–39.
- Ryff, C. D., Singer, B. H., & Dienberg, G. L. (2004). Positive health: Connecting well-being with biology. *Philosophical Transactions of the Royal Society of London. Series B: Biological Sciences*, 359(1449), 1383–1394.

Sakano, N. (2012). Factors associated with psychological distress of Public Health Nurse in Kagawa prefecture, Japan: A pilot study. *Open Journal of Nursing*, *2*(1), 23–26.

Salkind, N. (2010). Encyclopaedia of research design, SAGE.

- Salmon, P.G. (1990). A psychological perspective on musical performance anxiety: a review of the literature. *Medical Problems of Performing Artists*, 5(1): 2-11.
- Salmon, P., Shook, C.P., Lombart, K. & Berenson, G. (1995). Performance impairments, injuries, and stress hardiness in a sample of keyboard and other instrumentalists. *Medical Problems of Performing Artists*, 10: 140–146.
- Salonen, B. L. (2018). *Tertiary music students' experiences of an occupational health course incorporating the body mapping approach*, Unpublished doctoral dissertation, University of the Free State.
- Sampasa-Kanyinga, H., Zamorski, M. A., & Colman, I. (2018). The psychometric properties of the 10-item Kessler Psychological Distress Scale (K10) in Canadian military personnel. *PLoS ONE*, *13*(4), e0196562.
- Sandell, C., Frykman, M., Chesky, K., & Fjellman-Wiklund, A. (2009). Playing-related musculoskeletal disorders and stress-related health problems among percussionists. *Medical Problems of Performing Artists*, *24*(4), 175–180.
- Sandgren, M. (2002). Voice, soma, and psyche: A qualitative and quantitative study of opera singers. *Medical Problems of Performing Artists*, *17*(1), 11–21.
- Sarıkaya, M., & Kurtaslan, Z. (2018). Prediction of musical performance anxiety according to music teacher candidates' perfectionism and self-efficacy beliefs. *International Online Journal of Educational Sciences*, 10(4), 183-198.
- Sarros, J. C., Gray, J., & Densten, I. (2002). Leadership and its impact on organizational culture. *International Journal of Business Studies*, *10*(2), 1–26.
- Sartre, J.-P. (1956). Being and nothingness. Philosophical Library.

Sataloff, J., & Sataloff, R. T. (Eds.). (2005). Hearing Loss. CRC Press.

- Sataloff, R. T., Hawkshaw, M. J., & Gupta, R. (2010). Laryngopharyngeal reflux and voice disorders: An overview on disease mechanisms, treatments, and research advances. *Discovery Medicine*, 10(52), 213–224.
- Scheffler, R. M., Brown, T. T., & Rice, J. K. (2007). The role of social capital in reducing nonspecific psychological distress: The importance of controlling for omitted variable bias. *Social Science & Medicine (1982)*, 65(4), 842–854.
- Schieman, S., Van Gundy, K., & Taylor, J. (2001). Status, role, and resource explanations for age patterns in psychological distress. *Journal of Health and Social Behavior*, 42(1), 80–96.
- Schink, T., Kreutz, G., Busch, V., Pigeot, I., & Ahrens, W. (2014). Incidence and relative risk of hearing disorders in professional musicians. *Occupational and Environmental Medicine*, 71(7), 472–476.
- Schmidt, J. H., Pedersen, E. R., Juhl, P. M., Christensen-Dalsgaard, J., Andersen, T. D., Poulsen, T., & Bælum, J. (2011). Sound exposure of symphony orchestra musicians. *The Annals of Occupational Hygiene*, 55(8), 893–905.
- Schnell, T. (2011). Individual differences in meaning-making: Considering the variety of sources of meaning, their density and diversity. *Personality and Individual Differences*, 51(5), 667–673.
- Schnell, T., Höge, T., & Pollet, E. (2013). Predicting meaning in work: Theory, data, implications. *The Journal of Positive Psychology*, *8*(6), 543–554.
- Schoeb, V., & Zosso, A. (2012). "You cannot perform music without taking care of your body": A qualitative study on musicians' representation of body and health. *Medical Problems of Performing Artists*, 27(3), 129–136.
- Schulenberg, J. E., Sameroff, A. J., & Cicchetti, D. (2004). The transition to adulthood as a critical juncture in the course of psychopathology and mental health. *Development and Psychopathology*, *16*(04), 799–806.

- Schulenberg, S. E., Strack, K. M., & Buchanan, E. M. (2011). The meaning in life questionnaire: Psychometric properties with individuals with serious mental illness in an inpatient setting. *Journal of Clinical Psychology*, 67(12), 1210–1219.
- Schulz, W. (1981). Analysis of a symphony orchestra. In M. Piperek (Ed.), *Stress and music* (pp. 35–56). Wilhelm Braumuller.
- Schwarz, N., & Clore, G. L. (1983). Mood, misattribution, and judgments of well-being: Informative and directive functions of affective states. *Journal of Personality and Social Psychology*, 45(3), 513–523.
- Schwarz, N., & Strack, F. (1991). Evaluating one's life: A judgment model of subjective well-being. In *Subjective well-being: An interdisciplinary perspective* (pp. 27–47). Pergamon Press.
- Schwarz, N., Strack, F., Hippler, H.-J., & Bishop, G. (1991). The impact of administration mode on response effects in survey measurement. *Applied Cognitive Psychology*, 5(3), 193–212.
- Scroggins, W. (2008). Antecedents and outcomes of experienced meaningful work: A person-job fit perspective. *Journal of Business Inquiry*, *7*(1), 68–78.
- Searle, A. K., Van Hooff, M., McFarlane, A. C., Davies, C. E., Tran, T., Hodson, S. E., Benassi, H. P., & Steele, N. M. (2019). Screening for depression and psychological distress in a currently serving military population: The diagnostic accuracy of the K10 and the PHQ9. *Assessment*, 26(8), 1411–1426.
- Seligman, M. E. P. (1998). The President's address, APA. *American Psychologist*, 54, 559–562.
- Seligman, M. E. P. (2008). Positive Health. *Applied Psychology: An International Review*, 57, 3–18.
- Seligman, M. E. P. (2011). Flourish: A visionary new understanding of happiness and wellbeing. Free Press.

- Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, *55*(1), 5–14.
- Seligman, M. E. P., Ernst, R. M., Gillham, J., Reivich, K., & Linkins, M. (2009). Positive education: Positive psychology and classroom interventions. *Oxford Review of Education*, 35(3), 293–311.
- Seligman, M. E. P., Rashid, T., & Parks, A. C. (2006). Positive psychotherapy. *American Psychologist*, *61*(8), 774–788.
- Seligman, M. E. P., Steen, T. A., Park, N., & Peterson, C. (2005). Positive Psychology progress: Empirical Validation of Interventions. *American Psychologist*, 60(5), 410–421.
- Shapiro, A., & Keyes, C. L. M. (2008). Marital status and social well-being: Are the married always better off? *Social Indicators Research*, *88*(2), 329–346.
- Sheibani-Rad, S., Wolfe, S., & Jupiter, J. (2013). Hand disorders in musicians: The orthopaedic surgeon's role. *The Bone & Joint Journal*, *95-B*(2), 146–150.
- Shevlin, M. E., & Bunting, B. P. (1994). Confirmatory factor analysis of the Satisfaction with Life Scale. *Perceptual and Motor Skills*, 79(3), 1316–1318.
- Shin, D. C., & Johnson, D. M. (1978). Avowed happiness as an overall assessment of the quality of life. *Social Indicators Research*, *5*(1–4), 475–492.
- Shmotkin, D. (2005). Happiness in the face of adversity: Reformulating the dynamic and modular bases of subjective well-being. *Review of General Psychology*, *9*, 291–325.
- Shuter-Dyson, R. (2000). Profiling music students: Personality and religiosity. *Psychology of Music*, *28*(2), 190–196.
- Shuter-Dyson, R. (2006). Personality characteristics and the attitude to religion of church musicians. *Psychology of Music*, *34*(3), 391–398.

- Sigmon, S. T., Rohan, K. J., Dorhofer, D., Hotovy, L. A., Trask, P. C., & Boulard, N. (1997). Effects of consent form information on self-disclosure. *Ethics & Behavior*, 7(4), 299–310.
- Sin, N. L., & Lyubomirsky, S. (2009). Enhancing well-being and alleviating depressive symptoms with positive psychology interventions: A practice-friendly metaanalysis. *Journal of Clinical Psychology*, 65(5), 467–487.
- Sinden, L. M. (1999). Music performance anxiety: Contributions of perfectionism, coping style, self-efficacy, and self-esteem [Dissertation Abstracts International Section A: Humanities and Social Sciences, 60(3-A), 0590]. Arizona State University.
- Singer, B., & Ryff, C. D. (1999). Hierarchies of life histories and associated health risks. *Annals of the New York Academy of Sciences*, 896(1), 96–115.
- Sirri, L., Potena, L., Masetti, M., Tossani, E., Magelli, C., & Grandi, S. (2010). Psychological predictors of mortality in heart transplanted patients: A prospective, 6-year follow-up study: *Transplantation*, 89(7), 879–886.
- Skrabski, Á., Kopp, M., Rózsa, S., Réthelyi, J., & Rahe, R. H. (2005). Life meaning: An important correlate of health in the hungarian population. *International Journal of Behavioral Medicine*, 12(2), 78–85.
- Slater, C. (2003). Generativity versus Stagnation: An elaboration of Erikson's adult stage of human development. *Journal of Adult Development*, *10*, 53–65.
- Slavin, S., Schindler, D., Chibnall, J., Fendell, G., & Shoss, M. (2012). PERMA: A model for institutional leadership and culture change. *Academic Medicine : Journal of the Association of American Medical Colleges*, 87, 1481.
- Sloboda, J. A., Davidson, J. W., Howe, M. J. A., & Moore, D. G. (1996). The role of practice in the development of performing musicians. *British Journal of Psychology*, 87(2), 287–309.

- Smith, A., Maragos, A., & Van Dyke, A. (2000). Psychology of the musician. In R. Tubiana &
  P. Amadio (Eds.), *Medical problems of the instrumentalist musician* (pp. 135–170).
  Martin Dunitz.
- Smilde, R. (2016). Biography, identity, improvisation, sound: Intersections of personal and social identity through improvisation. *Arts and Humanities in Higher Education*, 15 (3-4): 308-324.
- Smith, D. W. (1992). Medical problems of orchestral musicians according to age and stage of career. *Medical Problems of Performing Artists*, *7*, 133–135.
- Smith, M. M., Saklofske, D. H. & Yan, G. (2015). Perfectionism, trait emotional intelligence, and psychological outcomes. *Personality and Individual Differences*, 85, 155-158.
- Smolej-Fritz, B., and Avsec, A. (2007). The experience of flow and subjective well-being of music students. *Horizons of Psychology*, *16*, 5–17.
- Snowden, M., Dhingra, S., Keyes, C., & Anderson, L. (2010). Changes in mental well-being in the transition to late life: Findings from MIDUSI and II. *American Journal of Public Health*, *100*, 2385–2388.
- Solano, C. H. (1987). Stereotypes of social isolation and early burnout in the gifted: Do they still exist? *Journal of Youth and Adolescence*, *16*(6), 527–539.
- Somers, J. M., Goldner, E. M., Waraich, P., & Hsu, L. (2006). Prevalence and incidence studies of anxiety disorders: A systematic review of the literature. *Canadian Journal of Psychiatry. Revue Canadienne De Psychiatrie*, *51*(2), 100–113.
- Spahn, C., Krampe, F. & Nusseck, M. (2021). Live music performance: The relationship between flow and music performance anxiety. *Frontiers in Psychology*, 12:725569.
- Spahn, C., Walther, J.-C., & Nusseck, M. (2016). The effectiveness of a multimodal concept of audition training for music students in coping with music performance anxiety. *Psychology of Music*, 44(4), 893–909.

- Sparks, J. R., & Schenk, J. A. (2001). Explaining the effects of transformational leadership: An investigation of the effects of higher-order motives in multilevel marketing organizations. *Journal of Organizational Behavior*, 22(8), 849–869.
- Spielberger, C. D. (1989). *State-Trait Anxiety Inventory: Bibliography (2nd ed.).* Consulting Psychologists Press.
- Spitzer, R. L., Kroenke, K., & Williams, J. B. (1999). Validation and utility of a self-report version of PRIME-MD: The PHQ primary care study. Primary Care Evaluation of Mental Disorders. Patient Health Questionnaire. *JAMA*, 282(18), 1737–1744.
- Springer, K. W., Pudrovska, T., & Hauser, R. M. (2011). Does psychological well-being change with age? Longitudinal tests of age variations and further exploration of the multidimensionality of Ryff's model of psychological well-being. *Social Science Research*, *40*(1), 392–398.
- Stallman, H. M. (2010). Psychological distress in university students: A comparison with general population data. *Australian Psychologist*, *45*(4), 249–257.
- Stanek, J. L., Komes, K. D., & Murdock, F. A. (2017). A cross-sectional study of pain among U.S. college music students and faculty. *Medical Problems of Performing Artists*, 32(1), 20–26.
- Stanhope, J., Tooher, R., Pisaniello, D., & Weinstein, P. (2019). Have musicians' musculoskeletal symptoms been thoroughly addressed? A systematic mapping review. *International Journal of Occupational Medicine and Environmental Health*, 32(3), 291–331.
- Stanton, A. L., Burker, E. J., & Kershaw, D. (1991). Effects of researcher follow-up of distressed subjects: Tradeoff between validity and ethical responsibility. *Ethics & Behavior*, 1(2), 105–112.
- Statistics Canada. (2007). *Age categories, life-cycle groupings*. Retrieved from https://www.statcan.gc.ca/eng/concepts/definitions/age2

- Steger, M. F. (2012). Experiencing meaning in life: Optimal functioning at the nexus of well-being, psychopathology, and spirituality. In P. Wong (Ed.), *The human quest for meaning: Theories, research, and applications, 2nd ed* (pp. 165–184). Routledge/Taylor & Francis Group.
- Steger, M. F. (2016). Creating meaning and purpose at work. In L. G. Oades, M. F. Steger,
  A. D. Fave, & J. Passmore (Eds.), *The Wiley Blackwell Handbook of the Psychology of Positivity and Strengths-Based Approaches at Work* (pp. 60–81). John Wiley & Sons,
  Ltd.
- Steger, M. F. (2019). Meaning in life and in work. In R. Yeoman, C. Bailey, A. Madden, & M. Thompson (Eds.), *The Oxford Handbook of Meaningful Work* (pp. 207–220). Oxford University Press.
- Steger, M. F., & Dik, B. J. (2009). If one is looking for meaning in life, does it help to find meaning in work? *Applied Psychology: Health and Wellbeing*, *1*(3), 303–320.
- Steger, M. F., & Dik, B. J. (2010). Work as meaning: Individual and organizational benefits of engaging in meaningful work. In N. Garcea, S. Harrington, & P. Linley (Eds.), *Oxford handbook of positive psychology and work* (pp. 131–142). Oxford University Press.
- Steger, M. F., Dik, B. J., & Duffy, R. D. (2012). Measuring meaningful work: The Work and Meaning Inventory (WAMI). *Journal of Career Assessment*, *20*(3), 322–337.
- Steger, M. F., Dik, B. J., & Shim, Y. (2019). Measuring satisfaction and meaning at work. In M. W. Gallagher & S. J. Lopez (Eds.), *Positive psychological assessment: A handbook of models and measures (2nd ed.).* (pp. 373–388). American Psychological Association.
- Steger, M., Frazier, P., Oishi, S., & Kater, M. (2006). The Meaning in Life Questionnaire: Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology*, 53(1), 80–93.

- Steger, M. F., Frazier, P. A., & Zacchanini, J. L. (2008). Terrorism in two cultures: Stress and growth following September 11 and the Madrid train bombings. *Journal of Loss and Trauma*, *13*(6), 511–527.
- Steger, M., & Kashdan, T. (2007). Stability and specificity of meaning in life and life satisfaction over one year. *Journal of Happiness Studies*, *8*, 161–179.
- Steger, M., Kashdan, T., Sullivan, B., & Lorentz, D. (2008). Understanding the search for meaning in life: Personality, cognitive style, and the dynamic between seeking and experiencing meaning. *Journal of Personality*, 76(2), 199–228.
- Steger, M. F., Kawabata, Y., Shimai, S., & Otake, K. (2008). The meaningful life in Japan and the United States: Levels and correlates of meaning in life. *Journal of Research in Personality*, 42(3), 660–678.
- Steger, M. F., Littman-Ovadia, H., Miller, M., Menger, L., & Rothmann, S. (2013). Engaging in work even when it is meaningless: Positive affective disposition and meaningful work interact in relation to work engagement. *Journal of Career Assessment*, 21(2),
- Steger, M. F., Mann, J. R., Michels, P., & Cooper, T. C. (2009). Meaning in life, anxiety, depression, and general health among smoking cessation patients. *Journal of Psychosomatic Research*, 67(4), 353–358.
- Steger, M. F., Oishi, S., & Kashdan, T. B. (2009). Meaning in life across the life span: Levels and correlates of meaning in life from emerging adulthood to older adulthood. *The Journal of Positive Psychology*, 4(1), 43–52.
- Steger, M. F., Pickering, N. K., Shin, J. Y., & Dik, B. J. (2010). Calling in work: Secular or sacred? *Journal of Career Assessment*, 18(1), 82–96.
- Steger, M. F., & Shin, J. Y. S. (2010). The relevance of the Meaning in Life Questionnaire: A look at the initial evidence. *The International Forum for Logotherapy*, *33*, 95–104.
- Steptoe, A. (1989). Stress, coping and stage fright in professional musicians. *Psychology of Music*, *17*(1), 3–11.

- Steptoe, A., Deaton, A., & Stone, A. A. (2015). Subjective wellbeing, health, and ageing. *Lancet*, *385*(9968), 640–648.
- Steptoe, A., & Fidler, H. (1987). Stage fright in orchestral musicians: A study of cognitive and behavioural strategies in performance anxiety. *British Journal of Psychology*, 78(2), 241–249.
- Sternbach, D. J. (1995). Musicians: A neglected working population in crisis. In Organizational risk factors for job stress (pp. 283–302). American Psychological Association.
- Stewart-Brown, S., Tennant, A., Tennant, R., Platt, S., Parkinson, J., & Weich, S. (2009).
  Internal construct validity of the Warwick-Edinburgh Mental Well-being Scale (WEMWBS): A Rasch analysis using data from the Scottish Health Education Population Survey. *Health and Quality of Life Outcomes*, 7, 15.
- Stiglitz, J. E., Sen, A., & Fitoussi, J.-P. (2007). Report by the Commission on the Measurement of Economic Performance and Social Progress. Retrieved from http://www.stiglitzsen-fitoussi.fr/documents/rapport\_anglais.pdf, [Accessed on November 28 2019].
- Stoeber, J., & Eismann, U. (2007). Perfectionism in young musicians: Relations with motivation, effort, achievement, and distress. *Personality and Individual Differences*, 43(8), 2182–2192.
- Stoeber, J., Haskew, A. E., & Scott, C. (2015). Perfectionism and exam performance: The mediating effect of task-approach goals. *Personality and Individual Differences*, 74, 171–176.
- Stoeber, J., & Otto, K. (2006). Positive conceptions of perfectionism: Approaches, evidence, challenges. *Personality and Social Psychology Review*, *10*(4), 295–319.
- Stone, A. A., Schwartz, J. E., Broderick, J. E., & Deaton, A. (2010). A snapshot of the age distribution of psychological well-being in the United States. *Proceedings of the National Academy of Sciences of the United States of America*, 107(22), 9985–9990.
- Suldo, S. M., & Shaffer, E. J. (2008). Looking beyond psychopathology: The dual-factor model of mental health in youth. *School Psychology Review*, *37*(1), 52–68.
- Sundquist, J., Bayard-Burfield, L., Johansson, L., & Johansson, S.-E. (2000). Impact of ethnicity, violence and acculturation on displaced migrants: Psychological distress and psychosomatic complaints among refugees in Sweden. *The Journal of Nervous and Mental Disease*, 188(6), 357–365.
- Swanson, J. L. (2012). Work and psychological health. In N. A. Fouad, J. A. Carter, & L. M. Subich (Eds.), APA handbook of counseling psychology, Vol. 2: Practice, interventions, and applications. (pp. 3–27). American Psychological Association.
- Swanson, S. A., Crow, S. J., Le Grange, D., Swendsen, J., & Merikangas, K. R. (2011). Prevalence and correlates of eating disorders in adolescents. Results from the national comorbidity survey replication adolescent supplement. *Archives of General Psychiatry*, 68(7), 714–723.
- Tambs, K. (2004). Moderate effects of hearing loss on mental health and subjective wellbeing: Results from the Nord-Trøndelag Hearing Loss Study. *Psychosomatic Medicine*, 66(5), 776–782.
- Tang, F., Byrne, M., & Qin, P. (2018). Psychological distress and risk for suicidal behavior among university students in contemporary China. *Journal of Affective Disorders*, 228(1), 101–108.
- Tedeschi, R. G., & Calhoun, L. G. (2004). Posttraumatic growth: Conceptual foundations and empirical evidence. *Psychological Inquiry*, *15*(1), 1–18.
- Telethon Institute for Child Health Research. (2019). *National Mental Health Survey of Doctors and Medical Students*. Beyond Blue Ltd.
- Tepas, D. (1990). Do eating and drinking habits interact with work schedule variables? Work & Stress, *3*(4), 203-211.

- Thapa, S. B., & Hauff, E. (2005). Gender differences in factors associated with psychological distress among immigrants from low- and middle-income countries. *Social Psychiatry and Psychiatric Epidemiology*, *40*(1), 78–84.
- The British Psychological Society. (2010). *Code of ethics and conduct*. Leicester: The British Psychological Society.
- Thelin, C., Mikkelsen, B., Laier, G., Turgut, L., Henriksen, B., Olsen, L. R., Larsen, J. K., & Arnfred, S. (2017). Danish translation and validation of Kessler's 10-item psychological distress scale—K10. *Nordic Journal of Psychiatry*, *71*(6), 411–416.
- Theorell, T. (1992). Personal control at work and health: A review of epidemiological studies in Sweden. In A. Steptoe & A. Appels (Eds.), *Stress, personal control and health* (pp. 49-64). John Wiley & Sons.
- Theorell, T., Ahlberg-hulten, G., Sigala, F., Perski, A., Soderholm, M., Kallner, A., & Eneroth,
  P. (1990). A psychosocial and biomedical comparison between men in six contrasting service occupations. *Work & Stress*, 4(1), 51–63.
- Thuné-Boyle, I. C., Stygall, J. A., Keshtgar, M. R., & Newman, S. P. (2006). Do religious/spiritual coping strategies affect illness adjustment in patients with cancer? A systematic review of the literature. *Social Science & Medicine (1982)*, 63(1), 151–164.
- Tims, M., Daantje, D., & Bakker, A. B. (2016). Job crafting and its relationships with person–job fit and meaningfulness: A three-wave study. *Journal of Vocational Behavior*, *92*, 44–53.
- Tomitaka, S., Kawasaki, Y., Ide, K., Akutagawa, M., Ono, Y., & Furukawa, T. A. (2019). Distribution of psychological distress is stable in recent decades and follows an exponential pattern in the US population. *Scientific Reports*, *9*(1), 11982.
- Toppila, E., Koskinen, H., & Pyykkö, I. (2011). Hearing loss among classical-orchestra musicians. *Noise and Health*, *13*(50), 45.

- Toyama, M., Fuller, H. R., & Hektner, J. M. (2020). Psychosocial factors promoting personal growth throughout adulthood. *Journal of Happiness Studies*, *21*(5), 1749–1769.
- Tummers, L. G., & Knies, E. (2013). Leadership and meaningful work in the public sector. *Public Administration Review*, *73*(6), 859–868.
- Twenge, J. M., Campbell, S. M., Hoffman, B. J., & Lance, C. E. (2010). Generational differences in work values: Leisure and extrinsic values increasing, social and intrinsic values decreasing. *Journal of Management*, *36*(5), 1117–1142.
- Twenge, J. M., & Joiner, T. E. (2020). Mental distress among U.S. adults during the COVID-19 pandemic. *Journal of Clinical Psychology*, *76*(12), 2170–2182.
- Upjohn, S. (2018). *Play well: Educating for the prevention of playing-related musculoskeletal injuries at a specialist music school in the UK. A physiotherapist-led action research project.* Unpublished doctoral dissertation, University of Cambridge.
- Vaag, J., Bjørngaard, J. H., & Bjerkeset, O. (2015). Symptoms of anxiety and depression among Norwegian musicians compared to the general workforce: *Psychology of Music*.
- Vaag, J., Giæver, F., & Bjerkeset, O. (2014). Specific demands and resources in the career of the Norwegian freelance musician. *Arts & Health*, 6(3), 205–222.
- Vaag, J., Saksvik-Lehouillier, I., Bjørngaard, J. H., & Bjerkeset, O. (2016). Sleep difficulties and insomnia symptoms in Norwegian musicians compared to the general population and workforce. *Behavioral Sleep Medicine*, *14*(3), 325–342.
- Vaag, J., Sund, E. R., & Bjerkeset, O. (2018). Five-factor personality profiles among Norwegian musicians compared to the general workforce. *Musicae Scientiae*, 22(3), 434–445.
- Vaillant, G. (2003). Mental health. The American Journal of Psychiatry, 160(8), 1373–1384.

- van Fenema, E., & van Geel, C. (2014). Mental problems among first-year conservatory students compared with medical students. *Medical Problems of Performing Artists*, 29(2), 113–114.
- van Kemenade, J. F. L. M., van Son, M. J. M., & van Heesch, N. C. A. (1995). Performance anxiety among professional musicians in symphonic orchestras: A self-report study. *Psychological Reports*, *77*(2), 555–562.
- Van Ranst, N., & Marcoen, A. (1997). Meaning in life of young and elderly adults: An examination of the factorial validity and invariance of the Life Regard Index. *Personality and Individual Differences*, 22(6), 877–884.
- van Woerkom, M., & Meyers, M. C. (2015). My strengths count! Effects of a strengthsbased psychological climate on positive affect and job performance. *Human Resource Management*, 54(1), 81–103.
- Vasquez, C. (2011). *Salud mental positiva: Un reto radical para la Psicología*. I Jornadas de Psicología Positiva en la UCM, Madrid.
- Vassar, M. (2008). A note on the score reliability for the Satisfaction With Life Scale: An RG study. *Social Indicators Research*, *86*(1), 47–57.
- Vázquez, F. L., Otero, P., & Díaz, O. (2012). Psychological distress and related factors in female college students. *Journal of American College Health*, *60*(3), 219–225.
- Veltman, A. (2016). *Meaningful work*. Oxford University Press.
- Venning, A., Kettler, L., Zajac, I., Wilson, A., & Eliott, J. (2011). Is hope or mental illness a stronger predictor of mental health? *The International Journal of Mental Health Promotion*, 13, 32–39.
- Vervainioti, A., & Alexopoulos, E. (2015). Job-related stressors of classical instrumental musicians: A systematic qualitative review. *Medical Problems of Performing Artists*, 30(4), 197–202.

- Villar, F. (2012). Successful ageing and development: The contribution of generativity in older age. *Ageing and Society*, *32*, 1–19.
- Vitaliano, P., Russo, J., Young, H., Becker, J., & Maiuro, R. (1991). The screen for caregiver burden. *The Gerontologist*, *31*, 76–83.
- Voltmer, E., Zander, M., Fischer, J., Kudielka, B., Richter, B., & Spahn, C. (2012). Physical and mental health of different types of orchestra musicians compared to other professions. *Medical Problems of Performing Artists*, *27*, 9–14.
- Wade, T. D., O'Shea, A., & Shafran, R. (2016). Perfectionism and eating disorders. In F. M.
  Sirois & D. S. Molnar (Eds.), *Perfectionism, health, and well-Being* (pp. 205–222).
  Springer International Publishing.
- Wadman, R., Webster, L., Mawn, L., & Stain, H. J. (2019). Adult attachment, psychological distress and help-seeking in university students: Findings from a cross-sectional online survey in England. *Mental Health & Prevention*, 13, 7–13.
- Wahlström Edling, C., & Fjellman Wiklund, A. (2009). Musculoskeletal disorders and asymmetric playing postures of the upper extremity and back in music teachers A pilot study. *Medical Problems of Performing Artists*, *24*, 113–118.
- Walker, I. J., & Nordin-Bates, S. M. (2010). Performance anxiety experiences of professional ballet dancers: The importance of control. *Journal of Dance Medicine* & Science, 14(4), 133–145.
- Wallis, C. (2005). *The new science of happiness*. TIME. Retrieved from http://content.time.com/time/magazine/article/0,9171,1015832,00.html
- Walter, J. S. (2009). Sound exposure levels experienced by university wind band members. *Medical Problems of Performing Artists*, *24*(2), 63–70.
- Walters, V., McDonough, P., & Strohschein, L. (2002). The influence of work, household structure, and social, personal and material resources on gender differences in

health: An analysis of the 1994 Canadian National Population Health Survey. *Social Science & Medicine (1982)*, *54*(5), 677–692.

- Ware Jr., J. E. (1999). SF-36 Health Survey. In *The use of psychological testing for treatment planning and outcomes assessment, 2nd ed* (pp. 1227–1246). Lawrence Erlbaum Associates Publishers.
- Waterman, A. S. (1993). Two conceptions of happiness: Contrasts of personal expressiveness (eudaimonia) and hedonic enjoyment. *Journal of Personality and Social Psychology*, 64(4), 678–691.
- Waterman, A. S. (2011). Eudaimonic identity theory: Identity as self-discovery. In S. J. Schwartz, K. Luyckx, & V. L. Vignoles (Eds.), *Handbook of identity theory and research, Vols. 1 and 2* (pp. 357–379). Springer Science + Business Media.
- Waterman, A. S., Schwartz, S. J., & Conti, R. (2008). The implications of two conceptions of happiness (Hedonic Enjoyment and Eudaimonia) for the understanding of intrinsic motivation. *Journal of Happiness Studies*, 9(1), 41–79.
- Waterman, A. S., Schwartz, S. J., Zamboanga, B. L., Ravert, R. D., Williams, M. K., Agocha, V. B., Kim, S. Y., & Donnellan, M. B. (2010). The questionnaire for eudaimonic well-being: Psychometric properties, demographic comparisons, and evidence of validity. *The Journal of Positive Psychology*, 5(1), 41–61.
- Watson, A. (2009). The biology of musical performance and performance-related injury. Scarecrow Press.
- Weeks, K. (2019). Generational differences in definitions of meaningful work: A mixed methods study. *Journal of Business Ethics*, *156*(3), 1045–1061.
- Weeks, K. P., & Schaffert, C. (2019). Generational differences in definitions of meaningful work: A mixed methods study. *Journal of Business Ethics*, *156*(4), 1045–1061.
- Weich, S., Brugha, T., King, M., McManus, S., Bebbington, P., Jenkins, R., Cooper, C., McBride,O., & Stewart-Brown, S. (2011). Mental well-being and mental illness: Findings

from the Adult Psychiatric Morbidity Survey for England 2007. *British Journal of Psychiatry*, 199(1), 23–28.

- Weinstein, N., Ryan, R. M., & Deci, E. L. (2012). Motivation, meaning, and wellness: A selfdetermination perspective on the creation and internalization of personal meanings and life goals. In P. Wang (Ed.), *The human quest for meaning: Theories, research, and applications, 2nd ed* (pp. 81–106). Routledge/Taylor & Francis Group.
- Weissman, J., Pratt, L., Miller, E., & Parker, J. (2015). Serious psychological distress among adults: United States, 2009-2013. *NCHS Data Brief*, *203*, 1–8.
- Wesner, R. B., Noyes, R., & Davis, T. L. (1990). The occurence of performance anxiety among musicians. *Journal of Affective Disorders*, *18*(3), 177–185.
- Westerhof, G. J., & Keyes, C. L. M. (2010). Mental illness and mental health: The two continua model across the lifespan. *Journal of Adult Development*, *17*(2), 110–119.
- Westermeyer, J., & Janca, A. (1997). Language, culture and psychopathology: Conceptual and methodological issues. *Transcultural Psychiatry*, *34*(3), 291–311.
- Weston, S. J., Hill, P. L., & Cardador, M. T. (2021). Working toward a purpose: Examining the cross-sectional and longitudinal effects of work characteristics on sense of purpose. *Journal of Personality*, 89(2), 244–257.
- Wheaton, B. (2007). The twain meet: Distress, disorder and the continuing conundrum of categories (comment on Horwitz). *Health*, *11*(3), 303–319.
- Whittington, B. L., & Scher, S. J. (2010). Prayer and subjective well-being: An examination of six different types of prayer. *International Journal for the Psychology of Religion*, 20(1), 59–68.
- WHO. (2005). World Health Organization. Basic documents, 45th ed. Retrieved from https://apps.who.int/iris/handle/10665/43134.

- Widiger, T. A., & Samuel, D. B. (2005). Diagnostic categories or dimensions? A question for the Diagnostic And Statistical Manual Of Mental Disorders-fifth edition. *Journal* of Abnormal Psychology, 114(4), 494–504.
- Williams, D. R., Mohammed, S. A., Leavell, J., & Collins, C. (2010). Race, socioeconomic status, and health: Complexities, ongoing challenges, and research opportunities: Race, SES, and health. *Annals of the New York Academy of Sciences*, *1186*(1), 69–101.
- Williamson, J., & Cloonan, M. (2016). Players' work time: A history of the British Musicians' Union, 1893-2013. Manchester University Press.
- Wills, G. I. (2003). Forty lives in the bebop business: Mental health in a group of eminent jazz musicians. *The British Journal of Psychiatry*, *183*(3), 255–259.
- Wilson, G. D. (2002). *Psychology for performing artists*, 2<sup>nd</sup> edition. Whurr.
- Wittchen, H. U., Jacobi, F., Rehm, J., Gustavsson, A., Svensson, M., Jönsson, B., Olesen, J., Allgulander, C., Alonso, J., Faravelli, C., Fratiglioni, L., Jennum, P., Lieb, R., Maercker, A., van Os, J., Preisig, M., Salvador-Carulla, L., Simon, R., & Steinhausen, H.-C. (2011). The size and burden of mental disorders and other disorders of the brain in Europe 2010. *European Neuropsychopharmacology: The Journal of the European College of Neuropsychopharmacology*, *21*(9), 655–679.
- Wittchen, H. U., Nelson, C. B., & Lachner, G. (1998). Prevalence of mental disorders and psychosocial impairments in adolescents and young adults. *Psychological Medicine*, 28(1), 109–126.
- Wong, P. T. P. (2012). Toward a dual-systems model of what makes life worth living. In P.
  T. R. Wong (Ed.), *The human quest for meaning: Theories, research, and applications* (2nd ed., pp. 3–22). Routledge.
- Wood, A. M., & Joseph, S. (2010). The absence of positive psychological (eudemonic) wellbeing as a risk factor for depression: A ten year cohort study. *Journal of Affective Disorders*, 122(3), 213–217.

- World Health Organization. (1997). Composite International Diagnostic Interview-Auto (CIDI-A) version 2.1 and user manual. St Vincent's Hospital, Sydney, Australia: WHO CIDI Training and Reference Centre.
- Wrigley, W. J., and Emmerson, S. B. (2013). The experience of flow state in live music performance. *Psychology of Music*, 41, 292–305.
- Wrzesniewski, A. (2003). Finding positive meaning in work. In K. Cameron, J. Dutton, &
  R. Quinn (Eds.), *Positive Organizational Scholarship: Foundations of a New Discipline* (pp. 296–308). Berrett-Koehler Publishers,.
- Wrzesniewski, A., & Dutton, J. (2001). Crafting a job: Revisioning employees as active crafters of their work. *Academy of Management Review*, *26*, 179–201.
- Wrzesniewski, A., McCauley, C., Rozin, P., & Schwartz, B. (1997). Jobs, careers, and callings: People's relations to their work. *Journal of Research in Personality*, 31(1), 21–33.
- Wu, S. (2007). Occupational risk factors for musculoskeletal disorders in musicians: A systematic review. *Medical Problems of Performing Artists*, *22*, 43–51.
- Xing, Z., & Huang, L. (2014). The relationship between age and subjective well-being: Evidence from five capital cities in mainland China. *Social Indicators Research*, 117(3), 743–756.
- Yamada, Y., Klugar, M., Ivanova, K., & Oborna, I. (2014). Psychological distress and academic self-perception among international medical students: The role of peer social support. *BMC Medical Education*, 14(1), 256.
- Yang, F. M., & Kao, S. T. (2014). Item response theory for measurement validity. *Shanghai Archives of Psychiatry*, *26*(3), 171–177.
- Yiengprugsawan, V., Kelly, M., & Tawatsupa, B. (2014). Kessler Psychological Distress Scale. In A. C. Michalos (Ed.), *Encyclopedia of quality of life and well-being research* (pp. 3469–3470). Springer Netherlands.

- Yöndem, S., Yondem, Z., & Per, M. (2017). Personality traits and psychological symptoms of music and art students. *Journal of Education and Training Studies*, *5*, 53-59.
- Yoshimura, E., Fjellman Wiklund, A., Paul, P., Aerts, C., & Chesky, K. (2008). Risk factors for playing-related pain among piano teachers. *Medical Problems of Performing Artists*, *23*, 107–113.
- Young, K. C., Kashdan, T. B., Macatee, R. (2015). Strength balance and implicit strength measurement: New considerations for research on strengths of character. The *Journal of Positive Psychology*, 10(1), 17–24.
- Zander, M. F., Spahn, C., & Richter, B. (2008). Employment and acceptance of hearing protectors in classical symphony and opera orchestras. *Noise & Health*, *10*(38), 14–26.
- Zaza, C., Charles, C., & Muszynski, A. (1998). The meaning of playing-related musculoskeletal disorders to classical musicians. *Social Science & Medicine*, 47(12), 2013–2023.
- Zaza, C., & Farewell, V. T. (1997). Musicians' playing-related musculoskeletal disorders: An examination of risk factors. *American Journal of Industrial Medicine*, 32(3), 292–300.
- Zetterberg, C., Backlund, H., Karkson, J., Werner, H., & Olsson, L. (1998). Musculoskeletal problems among male and female music students. *Medical Problems of Performing Artists*, *13*(4), 160–166.
- Zhao, F., Manchaiah, V. K. C., French, D., & Price, S. M. (2010). Music exposure and hearing disorders: An overview. *International Journal of Audiology*, *49*(1), 54–64.
- Zhou, S., Leung, S. A., & Li, X. (2012). The meaning of work among Chinese university students: Findings from prototype research methodology. *Journal of Counseling Psychology*, 59(3), 408–423.

### **APPENDICES**



# MIND THE MIND:

## **WELLBEING SURVEY FOR PERFORMING ARTISTS**

Thank you so much for joining our "Mind the Mind" survey! This survey includes standardized measures covering aspects of general health, psychological wellbeing and character strengths. It should take around 20 minutes to complete. Feel free to take a break as you complete the survey. You can also fill it in across different days, or in different times of the day, as you wish. You are free to withdraw your participation at any time. The aim of this study is to generate a large-scale international profile of performing artists' wellbeing so we can develop our understanding of our strengths and challenges. Your participation is very important to us!

By completing and submitting your responses, you are giving consent for your answers to be used in the context of a doctoral research project being developed at the Royal College of Music, London. All data is anonymous and will be treated with full confidentiality.

As part of this study, you can receive individual feedback on your scores. This comes in the form of a report with your top Character Strengths profile. I will also be very happy to send you a summary of the main overall results of the study. You will have two optional boxes in the end of the survey to complete with an email address for this. Please note that individual reports will only be possible to generate if you answer all questions.

This project has been reviewed by the CUK Research Ethics Committee (REC). If you have any questions or comments feel free to contact me on sara.ascenso@rcm.ac.uk. Alternatively, you can contact my leading supervisor on aaron.williamon@rcm.ac.uk.

Many thanks for your collaboration!

\* 1. Year of birth:

2. What is your sex ?

Female

O Male

3. What is your nationality?

Country:

Mind the Mind: Wellbeing	Survey for	Performing Artists
--------------------------	------------	--------------------

4. What is your main area of work?

Music

Theatre/Acting

Musical Theatre

O Dance

Other (please specify)

5. How would you define yourself in terms of your main musical activity?

(note: if you maintain more than one of the activities listed, chose the one in which you spend the majority of your time)

- Teacher
- Student
- Performer (soloist)
- Performer (orchestral)
- Performer (ensemble choir)
- Performer (ensemble chamber)
- Performer (ensemble other)
- Composer
- Conductor

6. What level(s) do you teach?

Up to elementary school

Middle school

High school - general

High school - Junior college within a conservatoire

Higher education - University/College

Higher education - Conservatoire

Other (please specify)

7. What is your primary specialism (e.g. piano, voice, etc.)?

8. What is your secondary specialism (if applicable)?

9. For musicians only: what is your main musical genre?

Classical

🔵 Jazz

🔵 Pop

Other (please specify)

Mind the Mind	Wellbeing	Survey for	Performing Artists
---------------	-----------	------------	--------------------

10. For how long have you been involved in this field? (note: if you are a student, please answer in relation to your total years of study in the field; if you are a professional, please answer in relation to your professional activity in the field)

less than 5 years

5-10 years

🔵 10-15 years

15-20 years

🔵 more than 20 years

11. How would you describe your professional situation? (if both apply, choose the option that represents the majority of your time spent working)

On a contract

Freelance

Other (please specify)

\* 12. What is your country of work?

13. Do you maintain a parallel professional activity in an area outside performing arts? If so, please specify.

next questions ask your vi to do your usual activities	iews about your health. T	his information will help ke	ep track of how you feel a	nd how well you a
14. In general, would	vou sav vour health	is:		
Excellent	Very good	Good	Fair	Poor
$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
15. Compared to one	year ago, how would	d you rate your health	in general now?	
Much better now than one year ago	Somewhat better now than one year ago	About the same as one year ago	Somewhat worse now than one year ago	Much worse nov one year ag
$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$

### \* 16. The following items are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?

	Yes, limited a lot	Yes, limited a little	No, not limited at all
Vigorous activities, such as running, lifting heavy objects, participating in strenuous sports	$\bigcirc$	$\bigcirc$	$\bigcirc$
Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling or playing golf	$\bigcirc$	$\bigcirc$	$\bigcirc$
Lifting or carrying groceries	$\bigcirc$	$\bigcirc$	$\bigcirc$
Climbing several flights of stairs	$\bigcirc$	$\bigcirc$	$\bigcirc$
Climbing one flight of stairs	$\bigcirc$	$\bigcirc$	$\bigcirc$
Bending, kneeling, or stooping	$\bigcirc$	$\bigcirc$	$\bigcirc$
Walking more than a mile	$\bigcirc$	$\bigcirc$	$\bigcirc$
Walking several blocks	$\bigcirc$	$\bigcirc$	$\bigcirc$
Walking one block	$\bigcirc$	$\bigcirc$	$\bigcirc$
Bathing or dressing yourself	$\bigcirc$	$\bigcirc$	$\bigcirc$
Engaging in your regular artistic activity (rehearsing, performing)	$\bigcirc$	$\bigcirc$	$\bigcirc$
Additional comments			

\* 17. During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

	Yes	No
Cut down on the amount of time you spend on work or other activities	$\bigcirc$	$\bigcirc$
Accomplished less than you would like	$\bigcirc$	$\bigcirc$
Did work or other activities less carefully then usual	$\bigcirc$	$\bigcirc$

\* 18. During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbours or groups?

Not at all	Slightly	Moderately	Quite a bit	Extremely
$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$

\* 19. How much bodily pain have you had during the past 4 weeks?

None	Very mild	Mild	Moderate	Severe	Very Severe
$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$

\* 20. During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?

Not at all	A little bit	Moderately	Quite a bit	Extremely
$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$

\* 21. The following questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling.

How much of the time during the past 4 weeks...

	All of the time	Most of the time	A good bit of the time	Some of the time	A little of the time	None of the time
Did you feel full of energy?	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Have you been a very nervous person?	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Have you felt so down in the dumps that nothing could cheer you up?	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Have you felt calm and peaceful?	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Did you have a lot of energy?	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Have you felt downhearted and blue?	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Did you feel worn out?	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Have you been a happy person?	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Did you feel tired?	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$

All of the time	Most of the time	Some of th	e time A litt	le of the time	None of the time		
$\bigcirc$	$\bigcirc$	$\bigcirc$		$\bigcirc$	$\bigcirc$		
23 How TRUE or FAI	SE is each of the	following state	ments for you?				
	Definitely true	Mostly true	Don't know	Mostly false	Definitely fals		
I seem to get sick a little easier than other people	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
l am as healthy as most people I know	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
I expect my health to get worse	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
My health is excellent	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
Additional comments (optional)							

24. During the past 50 days, now much of the time did you leel								
	All the time	Most of the time	Some of the time	A little of the time	None of the time			
cheerful?	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
in good spirits?	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
extremely happy?	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
calm and peaceful?	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
satisfied?	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
full of life?	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			

\* 24. During the past 30 days, how much of the time did you feel..

\* 25. Using a scale from 0 to 10 where 0 means "the worst possible life overall" and 10 means "the best possible life overall", how would you rate your life overall these days?

Worst (0)	1	2	3	4	5	6	7	8	9	Best (10)
$\bigcirc$										

* 26. Please indicate how strongly you agree or disagree with each of the following statements:								
	Agree - Strongly	Agree - Somewhat	Agree - A little	Don´t know	Disagree - A little	Disagree - Somewhat	Disagree - Strongly	
like most parts of my personality	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	
When I look at the story of my life, I am pleased with how things have turned out so far	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	
Some people wander aimlessly through life, but I am not one of them	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	
The demands of everyday life often get me down	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	
In many ways I feel disappointed about my achievements in life	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	
Maintaining close relationships has been difficult and frustrating for me	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	
l live life one day at a time and don´t really think about the future	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	
In general, I feel I am in charge of the situation in which I live	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	
I am good at managing the responsibilities of daily life	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	
I sometimes feel as if I ´ve done all there is to do in life	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	

*	* 27. Please indicate how strongly you agree or disagree with each of the following statements:									
		Agree - Strongly	Agree - Somewhat	Agree - A little	Don´t know	Disagree - A little	Disagree - Somewhat	Disagree - Strongly		
	For me, life has been a continuous process of learning, changing, and growth	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
	I think it is important to have new experiences that challenge how I think about myself and the world	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
	People would describe me as a giving person, willing to share my time with others	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
	I gave up trying to make big improvements or changes in my life a long time ago	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
	I tend to be influenced by people with strong opinions	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
	I have not experienced many warm and trusting relationships with others	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
	I have confidence in my own opinions, even if they are different from the way most other people think	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
	I judge myself by what I think is important, not by the values of what others think is important	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		

	Agree - Strongly	Agree - Somewhat	Agree - A little	Don´t know	Disagree - A little	Disagree - Somewhat	Disagree - Strongly
The world is too complex for me	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I don´t feel I belong to anything I´d call a community	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I believe people who do a favor expect nothing in return	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I have something valuable to give the world	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
The world is becoming a better place for everyone	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I feel close to other people in my community	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
My daily activities do not create anything worthwhile for my community	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I cannot make sense of what´s going on in the world	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Society has stopped making progress	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
People do not care about other people´s problems	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$

#### \* 28. Please indicate how strongly you agree or disagree with each of the following statements:

*	29. Please indicate how	w strongly	you agree o	r disagree wi	th each of t	he following	statements:	
		Agree - Strongly	Agree - Somewhat	Agree - A little	Don´t know	Disagree - A little	Disagree - Somewhat	Disagree - Strongly
	My community is a source of comfort	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
	I try to think about and understand what could happen next in our community	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
	Society isn´t improving for people like me	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
	I believe that people are kind	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
	I have nothing important to contribute to society	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$

#### 30. Below are five statements with which you may agree or disagree. Using

the 1-7 scale, indicate your agreement with each item. Please be open and honest in your responding.

	1- Strongly Disagree	2- Disagree	3- Slightly Disagree	4- Neither Agree or Disagree	5- Slightly Agree	6- Agree	7- Strongly Agree
In most ways my life is close to my ideal.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
The conditions of my life are excellent.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I am satisfied with life.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
So far I have gotten the important things I want in life.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
If I could live my life over, I would change almost nothing.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$

\* 31. The following questions ask about how you have been feeling during the past 30 days. For each question, please choose the number that best describes how often you had this feeling.

During the past 30 days, about how often did you feel ...

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
nervous?	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
hopeless?	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
restless or fidgety?	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
so depressed that nothing could cheer you up?	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
that everything was an effort?	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
worthless?	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$

\* 32. The last six questions asked about feelings that might have occurred during the past 30 days. Taking them altogether, did these feelings occur: more often in the past 30 days than is usual for you, about the same as usual, or less often than usual?

(If you never have any of these feelings, choose the option "About the same as usual.")

More often than	More often than	More often than	About the same as usual	Less often than	Less often than	Less often than
usual: A lot	usual: Some	usual: A little		usual: A little	usual: Some	usual: A lot
$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$

\* 33. During the past 30 days, how many days out of 30 were you totally unable to work or carry out your normal activities because of these feelings?

|--|

\* 34. Not counting the days you reported in the previous response, how many days in the past 30 days were you able to do only half or less of what you would normally have been able to do, because of these feelings?

(Number of days)

\* 35. During the past 30 days, how many times did you see a doctor or other health professional about these feelings?

(Number of days)

*	* 36. During the past 30 days, how often have physical health problems been the main cause of these feelings?										
	All of the time	Most of the time	Some of the time	A little of the time	None of the time						
	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$						

\* 37. Please could you tell us again how you would define yourself in terms of your main activity choosing, this time, from these 6 options?

(note: if you maintain more than one of the activities listed, chose the one in which you spend the majority of your time)

- Choreographer
- O Director
- Student Music
- Student Theatre/Acting
- Student Dance
- Composer
- Teacher
- Performer (musician, actor, dancer)

The following questions concern your feelings about your job during the last year. (If you have been on this job for less than a year, this concerns the entire time you have been at this job). Please indicate how true each of the following statements is for you given your experiences on this job. Remember this is an anonymous and confidential questionnaire. If you have more than one job in different areas, please answer the questions in relation to your job in the performing arts.

#### \* 42. Please use the following scale in responding to the items:

	1- Not at all		_	4- Somewhat	_	_	
	true	2	3	true	5	6	7- Very true
I feel like I can make a lot of inputs to deciding how my job gets done	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I really like the people I work with	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I do not feel very competent when I am at work	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
People at work tell me I am good at what I do	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I feel pressured at work	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
l get along with people at work	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I pretty much keep to myself when I am at work	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I am free to express my ideas and opinions on the job	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I consider the people I work with to be my friends	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I have been able to learn interesting new skills on my job	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Other comments							

#### \* 43. Please use the following scale in responding to the items:

When I am at work, I have to do what I am told   Most days I feel a sense of a coornplishment from working   My feelings are taken into consideration at work   On my job I do not get much of a chance to show how capable I am   People at work care about me   about me   I feel like I can pretty much bit is not get much of a coornplishment from is not much on the work in the myself at work   My feelings are taken into consideration at work (are about me   I feel like I can pretty much bit is not get much of a chance to show how capable I am   I feel like I can pretty much be myself at work   I feel like I can pretty much be myself at work with do not seem to like me   I feel like I can pretty much be myself at work with do not feel very capable   I feel like I can pretty much be myself at work with do not feel very capable   I feel like I can pretty much be myself at work with do not feel very capable   I feel like I can pretty much be myself at work with do not feel very capable   I feel like I can pretty much be myself at work with do not feel very capable   I feel like I can pretty much be myself at work are mere much and bit me much and		1- Not at all true	2	3	4- Somewhat true	5	6	7- Very true
Most days I feel a sense ovorking Image: Complishment from working Image: Complishmen	When I am at work, I have to do what I am told	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
My feelings are taken into consideration at work Image: Construct on the state of	Most days I feel a sense of accomplishment from working	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
On my job I do not get much of a chance to show how capable I am Image: Constraint of a chance to show how capable I am Image: Constraint of a chance to show how capable I am   People at work care about me Image: Constraint of a chance to about me Image: Constraint of a chance to show how capable I am   There are not many people at work that I am close to Image: Constraint of a chance to show how capable I am Image: Constraint of a chance to show how capable I am   There are not many people at work that I am close to Image: Constraint of a chance to show how capable I am Image: Constraint of a chance to show how capable I am   I feel like I can pretty much be myself at work Image: Constraint of a chance to show how capable I am Image: Constraint of a chance to show how capable I am   I feel like I can pretty much be myself at work Image: Constraint of a chance to show how capable I am Image: Constraint of a chance to show how capable I am   I feel like I can pretty much be myself at work Image: Constraint of a chance to show how capable I am Image: Constraint of a chance to show how capable I am   When I am working I often do not feel very capable Image: Constraint of a chance to show how capable I am Image: Constraint of a chance to show how capable I am   When I am working I often do not feel very capable Image: Constraint of a chance to chance to show how capable Image: Constraint of a chance to chance to show how capable   People at work are me Image: Constraint of a chance to chance to show how capable Image: Constraint of a c	My feelings are taken into consideration at work	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
People at work care about me   about me     There are not many people at work that I am close to   I feel like I can pretty much be myself at work   I feel like I can pretty much be myself at work   I feel like I can pretty much be myself at work   I feel like I can pretty much be myself at work   I feel like I can pretty much be myself at work   I feel like I can pretty much be myself at work   I feel like I can pretty much be myself at work   I feel like I can pretty much be myself at work   I feel like I can pretty much be myself at work   I feel like I can pretty much be myself at work   I feel like I can pretty much be myself at work   I feel like I can pretty much be myself at work   I feel like I can pretty much be myself at work   I feel like I can pretty much be myself at work   I feel like I can pretty much be myself at work   I feel like I can pretty myself at work   I feel like I can pretty myself at work   I feel like I can pretty myself at work   I feel like I can pretty myself at work   I feel like I can pretty myself at work   I feel stort much opportunity for me to decide for myself how to go about my work   People at work are pretty friendly towards me   I feel stort are pretty friendly towards me   I feel stort are pretty friendly towards me	On my job I do not get much of a chance to show how capable I am	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
There are not many people at work that I am close to   I feel like I can pretty much be myself at work   I feel like I can pretty much be myself at work   I feel like I can pretty much be myself at work   I feel like I can pretty much be myself at work   I hep people I work with do not seem to like me much   I hep people I work with do not seem to like me much   I hep people I work with do not seem to like me much   I hep people I work with do not feel very capable   I here is not much opportunity for me to decide for myself how to go about my work   People at work are pretty friendly towards me me   I here romments	People at work care about me	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I feel like I can pretty   much be myself at work     The people I work with   do not seem to like me   much     When I am working I   often do not feel very   capable     There is not much   opportunity for me to   decide for myself how to   go about my work     People at work are   pretty friendly towards   me     Other comments	There are not many people at work that I am close to	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
The people I work with do not seem to like me much   When I am working I often do not feel very capable   There is not much opportunity for me to decide for myself how to go about my work   People at work are pretty friendly towards me   Other comments	I feel like I can pretty much be myself at work	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
When I am working I often do not feel very capable       Image: Constraint of the serve of the	The people I work with do not seem to like me much	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
There is not much opportunity for me to decide for myself how to go about my work       Image: Constraint of the second secon	When I am working I often do not feel very capable	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
People at work are pretty friendly towards me	There is not much opportunity for me to decide for myself how to go about my work	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Other comments	People at work are pretty friendly towards me	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
	Other comments							

\* 44. Please indicate how well the following statements apply to you and your work and/or career. Please try to answer as truthfully as you can.

	Absolutely Untrue		Neither True nor Untrue/ Can't Say		Absolutely True
I have found a meaningful career	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
l view my work as contributing to my personal growth	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
My work really makes no difference in the world	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I understand how my work contributes to my life's meaning	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I have a good sense of what makes my job meaningful	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I know my work makes a positive difference in the world	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
My work helps me better understand myself	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I have discovered work that has a satisfying purpose	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
My work helps me make sense of the world around me	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
The work I do serves a great purpose	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$

#### Mind the Mind: Wellbeing Survey for Performing Artists

We are entering into the final set of questions! Thanks for your great participation so far. This final set of questions is about your personality. Just a reminder that all information is entirely anonymous and confidential.

\* 45. Please choose one option in response to each statement. All of the questions reflect statements that many people would find desirable, but please answer only in terms of whether the statement describes what you are like. Be honest and accurate!

	Very much like me	Like me	Neutral	Unlike me	Very much unlike me
Being able to come up with new and different ideas is one of my strong points.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I have taken frequent stands in the face of strong opposition.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
l never quit a task before it is done.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I always keep my promises.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I have no trouble eating healthy foods.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I always look on the bright side.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I am a spiritual person.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I know how to handle myself in different socia situations.		$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
l always finish what l start.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$

* 46. Please choose one option in response to each statement.								
		Very much like me	Like me	Neutral	Unlike me	Very much unlike me		
	I really enjoy doing small favors for friends.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
	There are people in my life who care as much about my feelings and well-being as they do about their own.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
	As a leader, I treat everyone equally well regardless of his or her experience.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
	Even when candy or cookies are under my nose, I never overeat.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
	I practice my religion.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
	I rarely hold a grudge.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
	I am always busy with something interesting.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
	I am thrilled when I learn something new.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
	I like to think of new ways to do things.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
	No matter what the situation, I am able to fit in.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
* 47. Please choose one option in response to each statement.								
---	-------------------	------------	------------	------------	------------------------	--	--	
	Very much like me	Like me	Neutral	Unlike me	Very much unlike me			
I never hesitate to publicly express an unpopular opinion.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
I believe honesty is the basis for trust.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
I go out of my way to cheer up people who appear down.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
I treat all people equal regardless of who they might be.		$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
One of my strengths is helping a group of people work well together even when they have their differences.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
I am a highly discipline person.	d 🔾	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
I always think before I speak.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
I experience deep emotions when I see beautiful things.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
At least once a day, I stop and count my blessings.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
Despite challenges, I always remain hopeful about the future.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			

* 48. Please choose one option in response to each statement.								
	Very much like me	Like me	Neutral	Unlike me	Very much unlike me			
My faith never deserts me during hard times.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
l do not act as if l am a special person.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
I welcome the opportunity to brighten someone else's day with laughter.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
l never seek vengeance.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
I value my ability to think critically.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
I have the ability to make other people feel interesting.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
I must stand up for wha I believe even if there are negative results.	t	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
I finish things despite obstacles in the way.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
I love to make other people happy.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
I am the most importan person in someone else's life.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			

* 49. Please choose one option in response to each statement.								
	Very much like me	Like me	Neutral	Unlike me	Very much unlike me			
I work at my very best when I am a group member.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
Everyone's rights are equally important to me.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
I see beauty that other people pass by without noticing.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
I have a clear picture in my mind about what I want to happen in the future.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
I never brag about my accomplishments.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
I try to have fun in all kinds of situations.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
I love what I do.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
I am excited by many different activities.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
l am a true life-long learner.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
I am always coming up with new ways to do things.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			

\* 50. Please choose one option in response to each statement.

	Very much like me	Like me	Neutral	Unlike me	Very much unlike me
People describe me as "wise beyond my years."	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
My promises can be trusted.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
l give everyone a chance.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
To be an effective leader, I treat everyone the same.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I never want things that are bad for me in the long run, even if they make me feel good in the short run.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I have often been left speechless by the beauty depicted in a movie.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
l am an extremely grateful person.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I try to add some humour to whatever I do.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I look forward to each new day.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I believe it is best to forgive and forget.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$

* 51. Please choose one option in response to each statement.								
	Very much like me	Like me	Neutral	Unlike me	Very much unlike me			
I have many interests.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
When the topic calls for it, I can be a highly rational thinker.		$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
My friends say that I have lots of new and different ideas.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
I am always able to loo at things and see the big picture.	k	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
I always stand up for my beliefs.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
l do not give up.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
I am true to my own values.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
I always feel the presence of love in my life.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
I can always stay on a diet.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
I think through the consequences every time before I act.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			

#### \* 52. Please choose one option in response to each statement.

	Very much like me	Like me	Neutral	Unlike me	Very much unlike me
I am always aware of the natural beauty in the environment.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
My faith makes me who I am.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I have lots of energy.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I can find something of interest in any situation.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I read all of the time.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Thinking things through is part of who I am.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I am an original thinker.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I am good at sensing what other people are feeling.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I have a mature view or life.		$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I am as excited about the good fortune of others as I am about my own.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$

* 53. Please choose one option in response to each statement.								
	Very much like me	Like me	Neutral	Unlike me	Very much unlike me			
I can express love to someone else.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
Without exception, I support my teammates or fellow group members.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
My friends always tell me I am a strong but fair leader.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
I always keep straight right from wrong.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
I feel thankful for what I have received in life.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
I know that I will succeed with the goals set for myself.	I O	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
I rarely call attention to myself.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
I have a great sense of humour.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
I rarely try to get even.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			
I always weigh the pro's and con's.	s ()	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$			

* 54. Please choose one option in response to each statement.							
	Very much like me	Like me	Neutral	Unlike me	Very much unlike me		
I stick with whatever I decide to do.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
I enjoy being kind to others.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
I can accept love from others.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
Even if I disagree with them, I always respect the leaders of my group.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
Even if I do not like someone, I treat him o her fairly.	r 🔘	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
As a leader, I try to make all group members happy.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
l am a very careful person.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
I am in awe of simple things in life that others might take for granted	5	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
When I look at my life, find many things to be grateful for.		$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
I have been told that modesty is one of my most notable characteristics.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		

* 55. Please choose one option in response to each statement.							
	Very much like me	Like me	Neutral	Unlike me	Very much unlike me		
I am usually willing to give someone another chance.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
I think my life is extremely interesting.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
I read a huge variety o books.	f	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
I try to have good reasons for my important decisions.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
I always know what to say to make people fee good.	el 🔵	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
I may not say it to others, but I consider myself to be a wise person.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
It is important to me to respect decisions mad by my group.	e 🔵	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
I always make careful choices.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
I feel a profound sense of appreciation every day.	$\circ$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
If I feel down, I always think about what is good in my life.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		

* 56. Please choose one option in response to each statement.							
	Very much like me	Like me	Neutral	Unlike me	Very much unlike me		
My beliefs make my life important.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
I awaken with a sense of excitement about the day's possibilities.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
I love to read nonfiction books for fun.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
Others consider me to be a wise person.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
I am a brave person.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
Others trust me to keep their secrets.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
I gladly sacrifice my self-interest for the benefit of the group I am in.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
I believe that it is worth listening to everyone's opinions.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
People are drawn to me because I am humble.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
I am known for my good sense of humour		$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		
People describe me as full of zest.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		

\* 57. Please take a moment to think about what makes your life feel important to you. Please respond to the following statements as truthfully and accurately as you can, and also remember that these are very subjective questions and that there are no right or wrong answers. Please answer according to the scale below:

	Absolutely Untrue	Mostly Untrue	Somewhat Untrue	Can't Say True or False	Somewhat True	Mostly True	Absolutely True
l understand my life's meaning	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I am always looking to find my life's purpose	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I have a good sense of what makes my life meaningful	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I am always searching for something that makes my life feel significant	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
My life has no clear purpose	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$

* 58. Please answer ac	* 58. Please answer according to the scale below:							
	Absolutely Untrue	Mostly Untrue	Somewhat Untrue	Can't Say True or False	Somewhat True	Mostly True	Absolutely True	
I am looking for something that makes my life feel meaningful	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	
My life has a clear sense of purpose	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	
I have discovered a satisfying life purpose	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	
I am seeking a purpose or mission for my life	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	
I am searching for meaning in my life	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	

nd the Minc	: Wellbeing Survey for Performing Artists
59. This is the send you yo	ie end of the survey. Thank you so much for your collaboration! We will be very happy to ur personal profile of character strengths. We will also be very glad to share the overall
	s study with you when it's finished.
Yes, pleas	se send me the overall results of the study to the email address below
No thanks	i.
Email address (treated confide	entially and used solely for the purposes of sending you the information you have requested)
60. Feel free	to add any further comments on the topics we explored that you consider relevant to sh

### THE MENTAL HEALTH CONTINNUM- LONG FORM

EWB1. During the past 30 days , how much of the time did you feel...

	All the time	Most of the	Some of the	A little of the	None of the
		time	time	time	time
a) cheerful?	1	2	3	4	5
b) in good spirits?	1	2	3	4	5
c) extremely happy?	1	2	3	4	5
d)calm and peaceful?	1	2	3	4	5
e)satisfied?	1	2	3	4	5
f) full of life?	1	2	3	4	5

EWB2. Using a scale from 0 to 10 where 0 means " the worst possible life overall " and 10 means " the best possible life overall, " how would you rate your life overall these days?

W0]	RST									BEST
0	1	2	3	4	5	6	7	8	9	10

PWB. Please indicate how strongly you agree or disagree with each of the following statements.

#### AGREE DISAGREE

Strongly	Somewhat	A little	Don't know	A little	Somewhat	Strongly
1	2	3	4	5	6	7

- 1. I like most parts of my personality
- 2. When I look at the story of my life, I am pleased with how things have turned out so far
- 3. Some people wander aimlessly through life, but I am not one of them
- 4. The demands of everyday life often get me down
- 5. In many ways I feel disappointed about my achievements in life
- 6. Maintaining close relationships bas been difficult and frustrating for me
- 7. I live life one day at a time and don't really think about the future
- 8. In general, I feel I am in charge of the situation in which I live
- 9. I am good at managing the responsibilities of daily life
- 10. I sometimes feel as if I've done all there is to do in life
- 11. For me, life has been a continuous process of learning, changing, and growth
- 12. I think it is important to have new experiences that challenge how I think about myself and the world
- 13. People would describe me as a giving person, willing to share my time with others
- 14. I gave up trying to make big improvements or changes in my life a long time ago
- 15. I tend to be influenced by people with strong opinions

16. I have not experienced many warm and trusting relationships with others

17. I have confidence in my own opinions, even if they are different from the way most other people think

18. I judge myself by what I think is important, not by the values of what others think is important

#### SOCIAL WELLBEING

- 1. The world is too complex for me
- 2. I don't feel I belong to anything I'd call a community
- 3. People who do a favor expect nothing in return
- 4. I have something valuable to give the world
- 5. The world is becoming a better place for Everyone
- 6. I feel close to other people in my community
- 7. My daily activities do not create anything worthwhile for my community
- 8. I cannot make sense of what's going on in the world
- 9. Society has stopped making progress
- 10. People do not care about other people's problems
- 11. My community is a source of comfort
- 12. I try to think about and understand what could happen next in our country
- 13. Society isn't improving for people like me
- 14. I believe that people are kind
- 15. I have nothing important to contribute to society

## THE SATISFACTION WITH LIFE SCALE

Below are five statements that you may agree or disagree with. Using the 1 - 7 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your responding.

- 7 Strongly agree
- 6 Agree
- 5 Slightly agree
- 4 Neither agree nor disagree
- 3 Slightly disagree
- 2 Disagree
- 1 Strongly disagree

\_\_\_ In most ways my life is close to my ideal.

\_ The conditions of my life are excellent.

\_\_\_\_ I am satisfied with my life.

\_\_\_\_\_ So far I have gotten the important things I want in life.

\_\_\_\_\_ If I could live my life over, I would change almost nothing.

Scoring:

- 31 35 Extremely satisfied
- 26 30 Satisfied
- 21 25 Slightly satisfied
- 20 Neutral
- 15 19 Slightly dissatisfied
- 10 14 Dissatisfied
- 5 9 Extremely dissatisfied











## **STUDY 1: PROFESSIONAL SITUATION**

	FREQUENCY	PERCENT
ON A CONTRACT	266	33.8
FREELANCE	491	62.3
BOTH	18	2.3
RETIRED	5	.6
TOTAL	780	100

# FREQUENCIES AND % BY MUSICAL GENRE

	FREQUENCY	PERCENT
Classical	932	91.9
Jazz	30	3
Рор	26	2.6
Rock	3	.3
World Music	1	.1
Various	7	.7
Traditional Folk Music	12	1.2
Blues	2	.1
Gospel	1	.1
TOTAL	1014	100

#### AREAS OF PARALLEL PROFESSIONAL ACTIVITY

AREA	FRENQUENCY	PERCENT
Health Professional	15	6.7
Arts Management and Administration	31	13.9
Sciences (Biological)	4	1.8
Luthier	7	3.1
Music Therapist	2	.9
Computer scientist/IT technician	9	4
Special needs tutor	1	0.4
Teacher (outside the arts)	22	9.9
Marketing specialist	2	.9
Manager (outside the arts)	16	7.2
Librarian	8	3.6
Lawyer	1	.4
Journalist	5	2.2
Visual artist	10	4.5
Writer	6	2.7
Engineer	3	1.3
Scientist (humanities)	7	3.1
Yoga/Pilates teacher	6	2.7
Retail worker	4	1.8
Copy editor	4	1.8
Mechanic	1	.4
Catering/hospitality worker	10	4.5
Gardener/farmer	2	.9
Sports coach	5	2.2
Officer	13	5.8
Translator	9	4
Chaplain	4	1.8
Occupational therapist	1	.4
Construction worker	1	.4
Sewing/costume worker	1	.4
Pipefitter	1	.4
Photographer	2	.9
Cleaner	1	.4
Carer	2	.9
Health support (massage therapy, AT)	5	2.2
TOTAL	164 <sup>1</sup>	100

<sup>1</sup> Of the n=233 reporting a parallel career, 164 provided information on its area of work.

	PA 1	PA 2	PA 3	PA 4	PA 5	PA 6	LS
PA 1	1	.786**	.648**	.516**	.568**	.615**	.527**
PA 2		1	.644**	.568**	.603**	.661**	.564**
PA 3			1	.515**	.556**	.638**	.518**
PA 4				1	.556**	.533**	.448**
PA 5					1	.635**	.572**
PA 6						1	.558**
Life Ev.							1

### **CORRELATION MATRIX FOR THE EMOTIONAL WELLBEING SCALE ITEMS**

\*\*. Correlation is significant at the 0.01 level (2-tailed).

Positive Affect 1. cheerful Positive Affect 2. In good spirits Positive Affect 3. Extremely happy Positive Affect 4. Calm and peaceful Positive Affect 5. satisfied Positive Affect 6. Full of life; Life evaluation.

### CORRELATION MATRIX FOR THE PSYCHOLOGICAL WELLBEING SCALES

	SA	EM	PR	PG	AUT	PL
SA	1	.591**	.499**	.423**	.316**	.251**
EM		1	.372**	.306**	.322**	.148**
PR			1	.315**	.182**	.235**
PG				1	.202**	.368**
AUT					1	.089**
PL						1

\*\*. Correlation is significant at the 0.01 level (2-tailed).

SA. Self-acceptance EM. Environmental Mastery PR. Positive Relations PG. Personal Growth AUT. Autonomy PL. Purpose in Life

### CORRELATION MATRIX FOR THE SOCIAL WELLBEING SCALES

	SI	SAcc	SAct	SCont	SCoh
Social Integration	1	410**	.339**	.388**	.431**
Social Acceptance		1	.490**	.236**	.266**
Social Actualization			1	.267**	.371**
Social Contribution				1	.456**
Social Coherence					1

\*\*. Correlation is significant at the 0.01 level (2-tailed).

SI. Social Integration SAcc. Social Acceptance SAct. Social Actualization SCont. Social Contribution SCoh. Social Coherence

Item	Item descriptor	Mean	S.D.
1	In most ways my life is close to my ideal.	4.5131	1.63161
2	The conditions of my life are excellent.	4.7869	1.57407
3	I am satisfied with life.	4.8278	1.59053
4	So far I have gotten the important things I want in life.	4.8223	1.59255
5	If I could live my life over, I would change almost nothing.	4.0281	1.83266

### MEANS AND STANDARD DEVIATIONS FOR THE SATISFACTION WITH LIFE SCALE ITEMS

## **KESSLER SCALE OF PSYCHOLOGICAL DISTRESS (K6)**

The following questions ask about how you have been feeling during the past 30 days. For each question, please select the option that best describes how often you had this feeling. From 1 to 5 (`never', `a little of the time', `some of the time', `most of the time', and `all of the time')

1. During the last 30 days, about how often did you feel nervous?

2. During the last 30 days, about how often did you feel hopeless?

3. During the last 30 days, about how often did you feel restless or fidgety?

4. During the last 30 days, about how often did you feel so sad that nothing could cheer you up?

5. During the last 30 days, about how often did you feel that everything was an effort?

6. During the last 30 days, about how often did you feel worthless?

#### **Optional Items:**

1. The last six questions asked about feelings that might have occurred during the past 30 days. Taking them altogether, did these feelings occur More often in the past 30 days than is usual for you, etc.

2. During the past 30 days, how many days out of 30 were you totally unable to work or carry out your normal activities because of these feelings?

3. Not counting the days you reported in response to Q3, how many days in the past 30 were you able to do only half or less of what you would normally have been able to do, because of these feelings?

4. During the past 30 days, how many times did you see a doctor or other health professional about these feelings?

5. During the past 30 days, how often have physical health problems been the main cause of these feelings?













## **PROFESSIONAL SITUATION**

	FREQUENCY	PERCENT
ON A CONTRACT	258	34.1
FREELANCE	472	62.3
ВОТН	18	2.4
RETIRED	5	.7
UNPAID	4	.5
TOTAL	757	100

# FREQUENCIES AND % BY MUSICAL GENRE

	FREQUENCY	PERCENT
Classical	689	90.4
Jazz	27	3.5
Рор	23	3.0
Rock	2	.3
World Music	1	.1
Various	7	.9
Traditional Folk Music	12	1.6
Blues	1	.1
TOTAL	762	100
#### AREAS OF PARALLEL PROFESSIONAL ACTIVITY

AREA	FRENQUENCY	PERCENT
Health Professional	15	6.9
Government/Public Administration	1	.5
Arts Administration	28	12.8
Sciences (Biological)	4	1.8
Luthier	7	3.2
Music Therapist	2	.9
Computer scientist/IT technician	10	4.6
Special needs tutor	1	.5
Teacher (outside the arts)	21	9.6
Marketing specialist	2	.9
Manager (outside the arts)	15	6.9
Librarian	8	3.7
Lawyer	1	.5
Journalist	5	2.3
Visual artist	10	4.6
Writer	6	2.8
Engineer	3	1.4
Scientist (humanities)	7	3.2
Yoga/Pilates teacher	6	2.8
Retail worker	4	1.8
Copy editor	4	1.8
Mechanic	1	.5
Catering/hospitality worker	10	4.6
Gardener/farmer	2	.9
Sports coach	5	2.3
Officer	12	5.5
Translator	9	4.1
Chaplain	4	1.8
Occupational therapist	1	.5
Construction worker	1	.5
Sewing/costume worker	1	.5
Pipefitter	1	.5
Photographer	2	.9
Performing artist (in a second field)	1	.5
Cleaner	1	.5
Carer	2	.9
Health support (massage therapy, AT)	5	2.3
TOTAL	218	100

		K6 1 Nervous	K6 2 Hopeless	K6 3 Restless	K6 4 Depressed	K6 5 Effort	K6 6 Worthless
K6 1	Nervous	1	.443**	.512**	.439**	.399**	.442**
K6 2	Hopeless	.443**	1	.473**	.682**	.557**	.648**
K6 3	Restless	.512**	.473**	1	.486**	.488**	.460**
K6 4	Depressed	.439**	.682**	.486**	1	.567**	.696**
K6 5	Everything is an Effort	.399**	.557**	.488**	.567**	1	.543**
K6 6	Worthless	.442**	.648**	.460**	.696**	.543**	1

### **CORRELATION MATRIX FOR THE K6 ITEMS**

\*\*. Correlation is significant at the 0.01 level (2-tailed).

						Reduced M	odel - Stepwise					
	Full Model					Process			Final Moc	lel		
	AIC	F	df	Р	Rsq	F	р	Step	AIC	F	Р	Rsq
Univariate Analysis												
Sex	2046.2	13.008	1	0.00032	0.013							
Age3Categories	2046.2	49.632	2	< 0.0001	0.092							
Age6Categories	2046.2	25.878	5	< 0.0001	0.117							
Age15Categories	2046.2	10.219	14	< 0.0001	0.129							
AgeContinuous	2046.2	128.6	1	< 0.0001	0.116							
PrimarySpecialism	2044	2.4919	8	0.01114	0.027							
ActivityProfStudent	2046.2	35.279	1	< 0.0001	0.034							
Activity9Categories	2038	4.9592	8	<0.0001	0.04							
Model 1	1931.3				0.14				1924.1			0.12
Sex			1							4.9947	0.02565	
AgeContinuous			1							119.5355	< 0.0001	
PrimarySpecialism		1.4157	8	0.1855		1.407	0.1892	4				
ActivityProfStudent			1			0.2077	0.6487	3				
Sex*Age		1.613	1	0.2044		2.9806	0.08459	5				
Sex*ActivityProfStudent		0.0078	1	0.9299		0.0078	0.9299	1				
Age*ActivityProfStudent		0.5518	1	0.4578		0.5793	0.4468	2				

### Appendix 6.10: Analysis Models – All Data

Model 2						
Sex		1				
AgeContinuous		1				
Activity9Categories	0.8911	8	0.5127	0.7922	0.6096	3
Sex*Age	2.5336	1	0.1118	2.9806	0.08459	4
Sex*Activity9Categories	0.0031	1	0.9553	0.0018	0.9658	2
Age*Activity9Categories	0.5202	1	0.4709	0.0031	0.9553	1

	Full Start	ing Model				Reduced M	lodel - Stepw	vise	Final Mod	lel		
	AIC	F	df	Р	Rsq	F	р	step	AIC	F	Р	Rsq
Univariate Analysis												
Sex	1589.3	5.5393	1	0.01885	0.05							
Age3Categories	1529.6	34.998	2	p<0.0001	0.08							
Age6Categories	1516.4	18.164	5	p<0.0001	0.11							
Age15Categories	1523.3	7.2884	14	p<0.0001	0.12							
AgeContinuous	1511.8	87.502	1	p<0.0001	0.1							
PrimarySpecialism	1589.1	2.21	8	0.02491	0.03							
Activity8Categories	1594.6	0.6566	7	0.709	0.006							
Activity4Categories	1590.5	0.227	3	0.8776	0.001							
Years of Experience	1560.9	10.173	4	p<0.0001	0.05							
Contract	1561.7	0.2512	1	0.6164	0.03							
Parallel	1594.5	0.3272	1	0.5675	0.0004							
Model 1	1526.4				0.12				1511.8			0.1
Sex			1			2.2549	0.1336	6				
AgeContinuous			1							87.502	p<0.0001	
Activity8Categories		0.7972	7	0.5898		0.8915	0.5126	3				
Years of Experience			4			0.7297	0.5718	2				
Parallel Profession		1.6782	1	0.1956		1.386	0.2395	4				
Sex*Age		0.3726	1	0.5418		2.177	0.1405	5				
Sex*Years of Experience		0.3738	1	0.8274		0.3738	0.8274	1				

Analysis Models - Professionals

Model 2	1529.2				0.12			
Sex			1			2.2549	0.1336	8
AgeContinuous			1					
Activity4Categories			3			0.7718	0.51	5
Years of Experience			4			0.8267	0.5083	3
Parallel Profession		2.0128	1	0.1564		1.386	0.2395	6
Sex*Age		0.0659	1	0.7975		2.177	0.1405	7
Sex*Years of Experience		0.3825	4	0.8212		0.3825	0.8212	1
Sex*Activity4Categories		0.646	3	0.5856		0.6283	0.5969	2
Age*Activity4Categories		1.0448	3	0.372		0.9601	0.411	4
Model 3	1520.9				0.14			
Sex			1			2.9699	0.0852	5
AgeContinuous			1					
PrimarySpecialism		1.8507	8	0.06486		1.9473	0.0505	6
Years of Experience			4			0.7261	0.5742	3
Parallel Profession		1.4119	1	0.23513		1.0283	0.3109	4
Sex*Age		0.0233	1	0.87861		0.0233	0.8786	1
Sex*Years of Experience		0.5713	1	0.68357		1.0675	0.3715	2

### Models - Students

	Full Starting	g Model		Reduced Model - Stepwise				
	AIC	F	df	Р	Rsq	F	р	step
Univariate Analysis								
Sex	417.15	3.3673	1	0.06785	0.015			
Age15Categories	427.44	0.708	14	0.6653	0.023			
AgeContinuous	419.48	1.0388	1	0.3092	0.005			
PrimarySpecialism	424.32	1.1513	7	0.3323	0.036			
Model 1	426.63				0.05			
Sex			1			3.3673	0.06785	4
AgeContinuous			1			1.5588	0.21318	3
PrimarySpecialism		0.9578	7	0.4631		0.956	0.4645	2
Sex*Age		0.0466	1	0.8293		0.0466	0.8293	1

Crosstabulation Analyses: K6\*MHC-LF for the musicians who provided full datasets on both the MHC-LF and the K6 with Chi-square tests

		MHC				
			LANG	MMH	FLOUR	Total
K6 Categories	No Mental Illness	Count	47 <sub>a</sub>	$351_{b}$	226c	624
		Expected Count	125.1	338.9	160	624
		% within K6 Categories	7.5%	56.3%	36.2%	100%
		% within FINAL_TERTILES	24.4%	67.1%	91.5%	64.8%
		Standardized Residual	-7	.7	5.2	
	Moderate Mental Illness	Count	76a	135 <sub>b</sub>	18c	229
		Expected Count	45.9	124.4	58.7	229
		% within K6 Categories	33.2%	59.0%	7.9%	100%
		% within FINAL_TERTILES	39.4%	25.8%	7.3%	23.8%
		Standardized Residual	4.4	1	-5.3	
	Serious Mental Illness	Count	70a	37 <sub>b</sub>	3c	110
		Expected Count	22	59.7	28.2	110
		% within K6 Categories	63.6%	33.6%	2.7%	100%
		% within FINAL_TERTILES	36.3%	7.1%	1.2%	11.4%
		Standardized Residual	10.2	-2.9	-4.7	
Total		Count	193	523	247	963
		Expected Count	193	523	247	963
		% within K6 Categories	20%	54.3%	25.6%	100%
		% within FINAL_TERTILES	100%	100%	100%	100%

#### K6 Categories \* MHC-LF Crosstabulation

Each subscript letter denotes a subset of MHC categories whose column proportions do not differ significantly from each other at the .05 level.

Chi-Square Tests								
			Asymptotic					
			Significance (2-					
	Value	df	sided)					
Pearson Chi-Square	260.740ª	4	.000					
Likelihood Ratio	257.704	4	.000					
Linear-by-Linear Association	225.903	1	.000					
N of Valid Cases	963							

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 22.05.

# THE MEANING IN LIFE QUESTIONNAIRE

Please take a moment to think about what makes your life feel important to you. Please respond to the following statements as truthfully and accurately as you can, and also please remember that these are very subjective questions and that there are no right or wrong answers. Please answer according to the scale below:

Absolutely	Mostly	Somewhat	Can't Say	Somewhat	Mostly	Absolutely
Untrue	Untrue	Untrue	True or False	True	True	True
1	2	3	4	5	6	7

1. I understand my life's meaning.

- 2. I am looking for something that makes my life feel meaningful.
- 3. I am always looking to find my life's purpose.
- 4. My life has a clear sense of purpose.
- 5. I have a good sense of what makes my life meaningful.
- 6. I have discovered a satisfying life purpose.
- 7. I am always searching for something that makes my life feel significant.

8. I am seeking a purpose or mission for my life.

9. My life has no clear purpose.

10. I am searching for meaning in my life

Scoring: MLQ scoring: Presence = 1, 4, 5, 6, & 9-reverse-coded Search = 2, 3, 7, 8, & 10

Based on a number of studies, we can make some probabilistic guesses about other areas of your life based on your scores on the MLQ. Please keep in mind that these are really only guesses and should not in any way be considered diagnostic. These guess are also a lot more likely to be accurate if you are from cultures similar to the United States.

If you scored above 24 on Presence and also above 24 on Search, you feel your life has a valued meaning and purpose, yet you are still openly exploring that meaning or purpose. Life's meaning is an ever-unfolding and ever-deepening process for you. You are more drawn to the question, "what can my life mean?" than to any single answer. You are likely satisfied with your life, generally optimistic, experience feelings of love frequently, and rarely feel depressed or anxious. You may be somewhat active in religious activities, but regardless of your involvement in religion, you are likely to feel that your spirituality is important to you. You place less value on pursuing simple sensory stimulation and pleasure than other people. You are generally certain of, and occasionally forceful regarding, your views and beliefs. Although you could be said to prefer having a stable structure in society and life, you see many areas for improvement to the current situation. People who know you would probably describe you as conscientious, thoughtful, easy to get along with, open to new experiences, and generally easy-going and emotionally stable.

If you scored above 24 on Presence and below 24 on Search, you feel your life has a valued meaning and purpose, and are not actively exploring that meaning or seeking meaning in your life. One might say that you are satisfied that you've grasped what makes your life meaningful, why you're here, and what you want to do with your life. You are probably highly satisfied with your life, optimistic, and have a healthy self-esteem. You frequently experience feelings of love and joy, and rarely feel afraid, angry, ashamed, or sad. You probably hold traditional values. You are usually certain of, and often forceful regarding, your views and likely support structure and rules for society and living. You are probably active in and committed to religious pursuits. People who know you would probably describe you as conscientious, organized, friendly, easy to get along with, and socially outgoing.

If you scored below 24 on Presence and also above 24 on Search, you probably do not feel your life has a valued meaning and purpose, and you are actively searching for something or someone that will give your life meaning or purpose. You may feel lost in life, and this idea may cause you distress. You are probably not always satisfied with your life. You may not experience emotions like love and joy that often. You may occasionally, or even often, feel anxious, nervous, or sad and depressed. You are probably questioning the role of religion in your life, and may be working hard to figure out whether there is a God, what life on Earth is really about, and which, if any,

religion is right for you. People who know you would probably describe you as liking to play things by ear, or "go with the flow" when it comes to plans. They might find you to be worried on occasion, and not particularly socially active.

If you scored below 24 on Presence and also below 24 on Search, you probably do not feel your life has a valued meaning and purpose, and are not actively exploring that meaning or seeking meaning in your life. Overall, you probably don't find the idea of thinking about your life's meaning very interesting or important. You may not always be satisfied with your life, or yourself, and you might not be particularly optimistic about the future. You may not experience emotions like love and joy that often. You may occasionally, or even often, feel anxious, nervous, or sad and depressed. You are probably do not hold traditional values, and may be more likely to value stimulating, exciting experiences, although you are not necessarily open-minded about everything. When you have big decisions to make, you may be prefer to identify the right answer based on your confidence that "you"ll know it when you see it." People who know you would probably describe you as sometimes disorganized, occasionally nervous or tense, and not particularly socially active or especially warm towards everyone.

# THE WORK AND MEANING INVENTORY

Work can mean a lot of different things to different people. The following items ask about how you see the role of work in your own life. Please honestly indicate how true each statement is for you and your work.

Scale:

Absolutely	Mostly	Neither True nor	Mostly	Absolutely
Untrue	Untrue	Untrue	True	True
1	2	3	4	5

1. I have found a meaningful career

2. I view my work as contributing to my personal growth.

3. My work really makes no difference to the world.

4. I understand how my work contributes to my life's meaning.

5. I have a good sense of what makes my job meaningful.

6. I know my work makes a positive difference in the world.

7. My work helps me better understand myself.

8. I have discovered work that has a satisfying purpose.

9. My work helps me make sense of the world around me.

10. The work I do serves a greater purpose.

Scoring:

Scoring instructions.

Add the ratings for items 1, 4, 5, and 8 to get the "Positive Meaning" score. The Positive Meaning scale reflects the degree to which people find their work to hold personal meaning, significance, or purpose.

Add the ratings for items 2, 7, and 9 to get the "Meaning-Making through Work" score. The Meaning-Making through Work score reflects the fact that work is often a source of broader meaning in life for people, helping them to make sense of their live experience.

Subtract the rating for item 3 from 6 (e.g., if a client gave item 3 a rating of 2, then their converted rating would be 4 [6-2=4]); add this number to the ratings for items 6 and 10 to get the "Greater Good Motivations" score. The Greater Good Motivations score reflects the degree to which people see that their effort at work makes a positive contribution and benefits others or society.

The Positive Meaning, Meaning-Making through Work, and Greater Good Motivations scores can all be added together to get the test-taker's overall Meaningful Work score. The Meaningful Work score reflects the depth to which people experience their work as meaningful, as something they are personally invested in, and which is a source of flourishing in their lives. Low scores on any of these scales reflect an absence of work meaning, and may be predictive of poor work engagement, low commitment to one's organization and intentions to leave, low motivation, a perceived lack of support and adequate guidance from leadership or management. People who score low on these scales are also more likely to be absent from work and experience both low levels of well-being and higher levels of psychological distress.











# **STUDY 3: PROFESSIONAL SITUATION**

	FREQUENCY	PERCENT
ON A CONTRACT	204	35.8
FREELANCE	356	62.5
ВОТН	5	.87
RETIRED	5	.87
TOTAL	569	100

# FREQUENCIES AND % BY MUSICAL GENRE

	FREQUENCY	PERCENT
Classical	722	94.7
Jazz	21	2.8
Other	14	1.9
TOTAL	757	100

### AREAS OF PARALLEL PROFESSIONAL ACTIVITY

AREA	FRENQUENCY	PERCENT
Health Professional	13	7.9%
Arts Management and Administration	24	14.6%
Sciences (Biological)	4	2.44%
Luthier	5	3.04%
Music Therapist	2	1.22%
Computer scientist/IT technician	8	4.88%
Special needs tutor	1	0.61%
Teacher (outside the arts)	15	9.15%
Marketing specialist	2	1.22%
Manager (outside the arts)	11	6.7%
Librarian	4	2.44%
Lawyer	1	0.61%
Journalist	3	1.83%
Visual artist	5	3.04%
Writer	4	2.44%
Engineer	1	0.61%
Scientist (humanities)	4	2.44%
Yoga/Pilates teacher	4	2.44%
Retail worker	4	2.44%
Copy editor	4	2.44%
Mechanic	1	0.61%
Catering/hospitality worker	9	5.48%
Gardener/farmer	1	0.61%
Sports coach	2	1.22%
Officer	8	4.87%
Translator	8	4.87%
Chaplain	2	1.22%
Occupational therapist	1	0.61%
Construction worker	1	0.61%
Sewing/costume worker	1	0.61%
Pipefitter	1	0.61%
Photographer	2	1.22%
Cleaner	1	0.61%
Carer	2	1.22%
Health support (massage therapy, AT)	5	3.04%
TOTAL	164	100

# CORRELATION MATRIX FOR THE *MEANING IN LIFE QUESTIONNAIRE* ITEMS

	MiLQ 1	MiLQ 2	MiLQ 3	MiLQ 4	MiLQ 5	MiLQ 6	MiLQ 7	MiLQ 8	MiLQ 9	MiLQ 10
MiLQ 1	1	134**	.126**	.651**	.679**	.642**	009	573**	129**	192**
MiLQ 2		1	.540**	146**	089*	179**	.646**	.203**	.668**	.702**
MiLQ 3			1	.122**	.138**	.096**	.637	038**	.494**	.466**
MiLQ 4				1	.664**	.746**	020	684**	168**	189**
MiLQ 5					1	.696**	.034	559**	109**	151**
MiLQ 6						1	024	650**	200**	232**
MiLQ 7							1	.061**	.549**	.552**
MiLQ 8								1	.177**	.236**
MiLQ 9									1	.801**
MiLQ 10										1

\*\*. Correlation is significant at the 0.01 level (2-tailed).\*. Correlation is significant at the 0.05 level (2-tailed).

MiLQ1. I understand my life's meaning.

MiLQ 2. I am looking for something that makes my life feel meaningful.

MiLQ 3. I am always looking to find my life's purpose.

MiLQ 4. My life has a clear sense of purpose.

MiLQ 5. I have a good sense of what makes my life meaningful.

MiLQ 6. I have discovered a satisfying life purpose.

MiLQ 7. I am always searching for something that makes my life feel significant.

MiLQ 8. I am seeking a purpose or mission for my life.

MiLQ 9. My life has no clear purpose.

MiLQ 10. I am searching for meaning in my life

# ITEM CORRELATION MATRIX FOR THE WORK AND MEANING INVENTORY (WAMI)

	1	2	3	4	5	6	7	8	9	10
1	1	.678**	278**	.598**	.594**	.489**	.439**	.629**	.422**	.479**
2		1	264**	.651**	.568**	.459**	.582**	.609**	.499**	.424**
3			1	292**	391**	477**	215**	321**	253**	438**
4				1	.725**	.542**	.610**	.675**	.569**	.554**
5					1	.577**	.498**	.710**	.470**	.580**
6						1	.468**	.558**	.465**	.693**
7							1	.593**	.611**	.493**
8								1	.551**	.605**
9									1	.558**
10										1

\*\*. Correlation is significant at the 0.01 level (2-tailed).\*. Correlation is significant at the 0.05 level (2-tailed).

- 1. I have found a meaningful career
- 2. I view my work as contributing to my personal growth.
- 3. My work really makes no difference to the world.
- 4. I understand how my work contributes to my life's meaning.
- 5. I have a good sense of what makes my job meaningful.

- 6. I know my work makes a positive difference in the world
- 7. My work helps me better understand myself.
- 8. I have discovered work that has a satisfying purpose.
- 9. My work helps me make sense of the world around me.
- 10. The work I do serves a greater purpose.

# SUB-SCALE CORRELATION MATRIX FOR THE WORK AND MEANING INVENTORY (WAMI)

			Greater good	
	Positive	<b>Meaning Making</b>	<b>Motivation Sub-</b>	<b>Overall Meaningful</b>
	Meaning	Through Work	scale	Work
<b>Positive Meaning</b>	1			
Meaning Making	.759**	1		
Through Work				
Greater good	.655**	.570**	1	
Motivation				
<b>Overall Meaningful</b>	.928**	.877**	.833**	1
work				

\*\*. Correlation is significant at the 0.01 level (2-tailed).

### HIERARCHICAL REGRESSION PREDICTING LIFE SATISFACTION

#### **Model Summary**

Model				Std. Error	R <sup>2</sup> Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.461ª	.212	.211	5.88939	.212	150.667	1	559	.000	
2	.486 <sup>b</sup>	.237	.234	5.80339	.024	17.690	1	558	.000	1.935

a. Predictors: (Constant), Meaning in Life Presence

b. Predictors: (Constant), Meaning in Life Presence, WAMI Presence Meaning

c. Dependent Variable: Satisfaction with Life Scale

ANOVAa										
Model		Sum of Squares	df	Mean Square	F	Sig.				
1	Regression	5225.864	1	5225.864	150.667	.000b				
	Residual	19388.871	559	34.685						
	Total	24614.735	560							
2	Regression	5821.638	2	2910.819	86.427	.000c				
	Residual	18793.097	558	33.679						
	Total	24614.735	560							

a. Dependent Variable: Satisfaction with Life Scale

b. Predictors: (Constant), MLQ-P c. Predictors: (Constant), MLQ-P , WAMI Presence Meaning Sub-scale

#### **Coefficients**<sup>a</sup>

		Unstand Coeffi	lardized cients	Standard. Coefficients		95% Confidence Interval for B		
Model		В	Std Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	9.190	1.195		7.691	.000	6.843	11.537
	Meaning in Life	.529	.043	.462	12.286	.000	.444	.613
	Presence							
2	(Constant)	6.160	1.382		4.456	.000	3.444	8.875
	Meaning in Life	.392	.054	.343	7.320	.000	.287	.497
	Presence							
	WAMI Presence	.398	.095	.196	4.185	.000	.211	.585
	Meaning							

a. Dependent Variable: Satisfaction with Life Scale