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Regular Article

Work and Wellbeing among Arts Professionals in China during COVID-19 (August 2020 and October 2021)

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ABSTRACT

This article explores the characteristics of arts professionals' work and health during the COVID-19 pandemic in China and how these relate to measures of mental and social wellbeing. Findings from two separate samples of arts professionals (Phase 1: August 2020, $N = 500$; Phase 2: October 2021, $N = 500$) using the *HEartS Professional: China* survey suggest that approximately half of the respondents experienced financial hardship as a result of the pandemic (58%, phase 2), were more anxious (47%, phase 2), and lonelier (43%, phase 2) than before. In regression models, better self-rated health was associated with higher mental health and social connectedness scores and lower depression and loneliness scores in both phases. More physical activity during the last month was associated with higher mental health and social connectedness in at least one phase. While rates of anxiety and loneliness were lower than in an earlier *HEartS Professional Survey* in the United Kingdom, some associations in the regression models, such as for health and physical activity during the last month, were similar. Longitudinal and international research on work, wellbeing, and retention of arts professionals is important for public policy and understanding variability across social and cultural contexts and systems.

In May 2020, the "value added of culture and related industries in China ha[d] reached over 3472 billion CNY (about £400 billion), accounting for 4.2 per cent of GDP" (British Council, 2020). Beyond their economic contribution, the arts have been found to contribute to health and wellbeing in China (Zhang et al., 2017) and beyond (All-Party Parliamentary Group on Arts Health and Wellbeing, 2017; Fujiwara et al., 2014; Lakey et al., 2017; MacDonald et al., 2012; Spiro & Sanfilippo, 2022; Tymoszuk et al., 2021). Like elsewhere, during the early weeks of the COVID-19 pandemic, cultural venues in China closed. For example, during the first 12-week lockdown, over 8000 live performance projects were cancelled or postponed, with an estimated total loss of over £1 billion to a music industry in China that is worth almost £50 billion (British Council, 2020). Early in May 2020, the Ministry of Culture and Tourism (MOCT) announced that venues would open with 30 per cent capacity, but all performance permits for visiting artists and companies remained on pause. The book industry in China experienced its first negative growth in 20 years, with 20% of small and medium sized publishing companies not releasing any new books in the first half of 2020 and more than 60% of companies reporting tight cash flow. Moreover, a survey conducted by Beijing OpenBook highlights that, although there was positive growth in sales in the first half of 2021 over 2020, performance still lagged compared with 2019 (Vecco et al., 2022).

Attention turned to online cultural activities, and several state initiatives began early on. For example, the government launched tax and fee relief measures for businesses, especially small firms and self-employed enterprises (British Council, 2020). Several national and international initiatives developed platforms to enable online viewing of museum exhibitions; China's National Administration of Cultural Heritage issued a statement requesting the country's state-owned and private museums to share their exhibitions online to "encourage the determination and morale of local people to fight the epidemic" (National Cultural Heritage Administration, 2020a; National Cultural Heritage Administration, 2020b). New collaborations among music labels, live venues, and short video platforms emerged (British Council, 2020). Some musicians have even earned more income online since the start of the pandemic than they had done through live, in-person, performances.

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One reason is connected to income streams; streaming platforms generate income from advertising not ticketing sales, so were less affected by the pandemic than in person performances (Gu et al., 2020). Another may be connected to cultural content and context. The example of the Chinese "indie" scene, described by Gu et al. (2020), highlights the increased accessibility of online music. Here, audience members did not need to consider physical barriers (e.g., not having to get to venues that may be located on the periphery of cities) or social barriers (e.g., audience members not having to consider social judgement in engaging in the indie scene in the same way as for an in-person venue[1]) (Gu et al., 2020).

More broadly, state-sponsored cultural institutions were protected, and the basic income of their workers guaranteed. However, not all Chinese arts professionals would have benefited from this. Non-state-owned cultural enterprises did not find all measures helpful. Artists not directly employed by large companies tend to be freelancers, sole traders, or micro-business owners. During the pandemic, people in these positions were severely affected but very few had state support. This is perhaps not suprising given the funding structure for performing arts in China which is dominated by commercial, privately owned, performing arts institutions (which in 2018 accounted for 87% of performing-arts institutions and 86% of all the performances (Ministry of Culture and Tourism, 2019)). A much smaller proportion is composed of sponsored performances, which, though they are also primarily produced by professional art institutions, are mostly funded by the government as nonprofit cultural projects. Jobs in the music sector were especially precarious and artists had to find ways to diversify income streams, including looking to support from philanthropists (Gu et al., 2020; Lee et al., 2021). Much like in other countries such as the United Kingdom (UK) Bennett, 2007), artists, such as musicians trained in the Western Classical tradition, have portfolio teaching and performing careers based on teaching and freelance working with a much smaller number of orchestral positions available than number of musicians trained for orchestral work (Guo & Wyszomirski, 2018). More generally, one report about Chinese musicians published in 2019 (The Zhang Fengyan Working Group, 2019), which included questionnaires completed by over 5000 respondents and 100 interviews, identified that the work is often part time, associated with low income, and is usually accompanied by other professional activities. In this study we explore how the changes in circumstances brought on by the COVID-19 pandemic affected performing artists' work and wellbeing in China.

China, of course, is not unique in experiencing challenges during the COVID-19 pandemic. Internationally, there is evidence that the arts sector was particularly affected by the pandemic and that the activities most reliant on "physical experiences at venues and sites have suffered the sharpest economic losses in relative terms" (UNESCO, 2021, p. 6). Unsurprisingly, these challenges have directly affected arts professionals. Globally, self-employed people working in the arts have experienced higher levels of income loss and unemployment than other categories of cultural and creative workers (UNESCO, 2021). Such disruption has also been connected to arts professionals' health and wellbeing, with increases in anxiety, loneliness, and financial hardship shown in April-June 2020 in the UK (Spiro et al., 2021). It has also been connected to feelings of the loss of a much-loved performing career, missing music making and colleagues, and anxiety about the future of the music profession by orchestral musicians during the first COVID-19 lockdown in the UK (Cohen & Ginsborg, 2021). During the pandemic, arts workers early in their career reported feeling committed and engaged with their creative practice, and simultaneously were seeking a more equitable, fairer, and diverse industry that protects artists and engages more flexibly with broader audiences (Shaughnessy et al., 2022).

Issues of mental and social wellbeing, depression, loneliness, and job security in portfolio careers have been often discussed in the context of arts workers in the UK and elsewhere (Spiro et al., 2021). Though less discussed in China, one study has explored health and injuries in pre-professional and professional Chinese dancers of different genres (Dang et al., 2020). The results showed that, compared with the results of a survey in the UK, alcohol consumption and smoking were significantly less in Chinese dancers, but a higher percentage reported using weight-reducing eating plans or having psychological issues with food. Reported injuries in a 12-month period prior to data collection were significantly lower in Chinese dancers. The type of injury (muscle and joint/ligament) and perceived cause of injury (fatigue, overwork, and reoccurrence of an old injury) were the same in both the current and previous survey, with over 40% of injuries being attributed to fatigue or overwork. Additionally, during the COVID-19 pandemic, one study of music teachers in Hong Kong suggested that music teachers are experiencing stress, fear, and anxiety in response to the pandemic (Cheng & Lam, 2021). Though there has been little work on artists' health and wellbeing in China, these studies suggests that at least for the dancers and musicains in these studies, there are open questions in this area and the issues of wellbeing and work for arts professionals more generally requires further investigation.

1. Research questions

In this study we broaden the scope beyond dancers in China and music teachers in Hong Kong and explore working patterns, income, and wellbeing among arts professionals in China. We do so at a particularly challenging time for the arts: during two phases of the COVID-19 pandemic following the initial lockdown in early 2020 (Phase 1: August 2020 and Phase 2: October 2021). We examined characteristics of arts professionals' work and health and investigated how these relate to measures of wellbeing through two research questions:

RQ1. What are the contributors to arts professionals' mental and social wellbeing in two snapshots during the COVID-19 pandemic in China?
RQ2. To what extent do artists see themselves as having a future working in the arts in China?

As described in the following section, we addressed these questions by conducting a survey that explored respondents' demographic characteristics, working patterns, health and exercise, and wellbeing. The survey was conducted twice with separate cross-sectional samples in August 2020 (Phase 1) and October 2021 (Phase 2).

2. Methods

2.1. Respondents

The survey was intended for arts professionals working in any capacity in China (Appendix A). We planned this to be a repeated sample, but a technical error in who the survey was sent to meant that this was not possible; we therefore present two snap shots with 500 stand-alone respondents in each phase. Demographic characteristics are summarized in Appendix B.

In Phase 1, almost half (48%) of the respondents were from the performing arts (including primarily acting and dancing or music or sound arts $n = 238$), while in Phase 2 there was a more even spread across the arts with 32% coming from the performing arts ($n = 162$). In Phase 1 59% of respondents identified as male while in Phase 2 59% identified as female. Respondents were aged 18–64 years. In Phase 1 they were 18–64 years old with 39% aged 18–35 years. In Phase 2, they

[1] As explained by Gu et al. "The tightening control of freedom of cultural expression from the national state, combined with commercial pressures directed in large part by the local state, had forced most forms of indie music making into underground, severely restricting its audience reach" (2020, pp. 69–70).

were 19–55 years with 47% aged 18–35 years. The most common ethnic group in both phases was Han ($n = 459$, 92% in Phase 1 and $n = 487$, 97% in Phase 2). In both phases, the three most often selected places where people lived were Guangdong, Beijing, and Shanghai. Most of the respondents in both phases had a tertiary (e.g., bachelors) or advanced qualification (e.g., Masters or PhD): 91% in Phase 1 and 96% in Phase 2. About three-quarters of the respondents lived with their spouse or partner ($n = 381$, 76% in both phases). One third of respondents ($n = 167$, 33%) had a household income of 300,000 Yuan or more in Phase 1 while a quarter had this range of income in Phase 2 ($n = 127$, 25%) and the income spanned the whole range (0–1,000,000 Yuan or more). The respondents contributed to about half of that income (52% on average in both phases) with about half of this income coming from work in the arts (55% in Phase 1 and 52% in Phase 2). On average, respondents worked more employed than freelance. Over a third of work was spent freelance in both phases (62% employed in Phase 1 and 59% employed in Phase 2) but less than 10% of respondents worked entirely freelance (9% in Phase 1 and 7% in Phase 2).

In order to explore how similar our sample is to arts professionals in China, we compared our sample's demographic characteristics with those of a 7500-member WeChat official channel called "Musical Performance (音乐表演)". Most members are professionals. 67% on the channel identify as women, 61% are aged 18–35 years and the three most common places people live are Shanghai (14%), Guangdong (11%), and Beijing (9%). These are considered the most developed areas in China and are usually called together in Chinese: "北上广". While our sample has a larger proportion of older professionals than on the WeChat channel, geographically and in terms of gender our sample lines up with this distribution in at least one phase well.

Over three-quarters of the respondents positively rated their health ($n = 416$, 83% rating it "Very good" or "Good" in Phase 1 and $n = 393$, 79% doing so in Phase 2) and did not report chronic health conditions ($n = 451$, 90% in Phase 1 and $n = 387$, 77% in Phase 2). Most of the respondents had not had or not knowingly had COVID-19 in either phase (99% in both phases). At the same time approximately half of the respondents reported a reduction in physical activity in the last month ($n = 286$, 57% in Phase 1 and $n = 257$, 51% in Phase 2) (Appendix C). A redacted version of the data set is available (see Williamon et al., 2023).

2.2. Procedure

The *HEartS Professional: China* survey (see Appendix A) - an adaptation of the *HEartS Professional* survey previously developed and used in the United Kingdom (Spiro et al., 2021(Spiro et al., 2021) - explores the impact of the COVID-19 pandemic on the health, wellbeing, and livelihoods of workers in the arts and cultural sectors. As described in (Spiro et al., 2021), the multi-strategy survey has two main goals: "(1) to chart working patterns, income, sources of support, and indicators of mental and social wellbeing in order to identify trends in the effects of lockdown, and (2) to explore the individual work and wellbeing experiences of arts professionals in their own words" (p. 3). Here, we report on five of the six areas covered by the survey: (1) demographic characteristics, (2) illness or self-isolation related to COVID-19, (3) work and income, (4) changes in work and income as a result of the pandemic, and (5) validated measures of health, and mental and social wellbeing (Spiro et al., 2021, p. 3).[2] Where possible, the survey includes validated measures (such as in section 5) or common ways of asking questions (such as in section 1). Where necessary we created new questions. Surveys are a commonly used approach to explore connections between wellbeing and other factors and allow for descriptive analysis and inferential statistical analysis of the connections between variables and outcomes measures from a large sample (see Young & Bhaumik, 2011, for an example of a national survey).

The Chinese authors checked the adaptation of the *HEartS Professional* survey for use in China. This process resulted in a small number of changes connected to the Chinese context including geographic regions and income brackets relevant to China. The survey was then translated using validated translations of standard measures wherever possible. The complete survey was piloted by about 10 resondents recruited through a WeChat group from the conservatoires in major Chinese cities to ensure that the survey was comprehensible and relevant to the possible professional contexts in China. This process was supported by research assistants at the Shanghai Conservatory of Music, China.

The survey was distributed through the professional edition of Wenjuan (English site: http://biz.wenjuan.net/), an online survey platform that pays respondents. Wenjuan.com is one of the biggest online survey platforms in China. Wenjuan.com has more than 20 million registered users, approximately half of whom are accurately tagged with detailed information such as their age, gender, location, education, and occupation. The respondents of our survey were initially approached by screening the 10 million registered users with detailed background information. After eligible respondents finished the survey, they received around 15 CNY (about £1.6) of virtual currency in their Wenjuan.com account. According to their past statistics, about 20–30% paid respondents are likely to respond (and complete the survey) while the response rate of unpaid respondents could be lower than 3%.

Ethical approval was granted by the Conservatoires UK Research Ethics Committee on 17 June 2020 and this committee was taken as the committee of record. Respondents provided informed consent at the start survey. The goal was to recruit respondents from all over China. The survey was open from 13–16 August 2020 for Phase 1 and from 14–26 October 2021 for Phase 2. Respondents were asked to report on their experiences in the month prior to completing the survey. During these periods in China there were different rates of COVID-19 and different restrictions in place around the country. For example, on 4 September 2021, Shanghai Symphony Orchestra successfully launched the Opening Concert of their 2021-22 Season featuring Ye Xiaogang's "The Song of the Earth" and Mahler's "Das Lied von der Erde" with more than one hundred musicians on stage and around one thousand audience members in the Hall (Shanghai Symphony Orchestra, 2021). However, at about the same time, the National Centre for the Performing Arts in Beijing cancelled a series of performances in September 2021 including a piano recital and several traditional Chinese Operas according to the "People's Government of Beijing Municipality's unified regulations on the prevention and control of the COVID-19 epidemic" (National Centre for the Performing Arts, 2021).

2.3. Outcome measures

Following the previous work in *HEartS Professional* (Spiro et al., 2021) – and its predecessor the *HEartS Survey* which investigated the Health, Economic, and Social impacts of the Arts (Tymoszuk et al., 2021) - this survey reflects the perspective that our wellbeing includes aspects of both positive- and ill-health (Seligman, 2008). As in Spiro et al., (Spiro et al., 2021), for mental wellbeing we include measures of mental health (the 14-item Mental Health Continuum – Short Form, the MHC-SF; (Keyes, 2005; Keyes, 2002) and depression (the eight-item Center for Epidemiologic Studies Depression Scale (CES-D, Karim et al., 2015). For social wellbeing, we include measures of social connectedness (the 15-item Social Connectedness, Lee et al., 2008) and loneliness (the Three-Item Loneliness Scale, Hughes et al., 2004), an adaptation of the Revised UCLA Loneliness Scale, Russell et al., 1980). The MHC-SF was previously validated and used in China (Yin & He, 2012; Yin et al., 2013). The eight item CES-D has been found to have good reliability and validity across all ages of urban populations in China (Zhang et al., 2010) and has been used with rural populations in China (Zhang et al., 2012). At the time of running this study, there was no validated translation available of the 15-item Social Connectedness

[2] A sixth area explored work and wellbeing experiences of lockdown including challenges and opportunities through open questions.

Scale, so the authors created their own translation. The scale has since been validated in China and been found to have reliability and cross-cultural adaptability (Wu et al., 2022). The Three-Item Loneliness Scale (Hughes et al., 2004) has been validated in the context of work with older people in China (Liu et al., 2020). More information about the scales is provided in (Spiro et al., 2021) and(Tymoszuk et al., 2021).

2.3.1. Analysis

An overview of changes in work patterns, financial hardship, loneliness, and anxiety was gained through descriptive statistics and we calculated correlations between each of the four outcome variables.[3] Following the process in (Spiro et al., 2021) to analyze the relationship between COVID-19-related, demographic, and arts work variables on one hand, and the outcomes of mental wellbeing, depression, social connectedness, and loneliness measures on the other, we ran separate hierarchical multiple linear regression models in jamovi (2.2.5.0; The jamovi project, 2021):

- Model 1 (run twice, once per phase) was adjusted for three variables that were connected directly to the pandemic: physical activity during the pandemic (Lockdown exercise), perceptions of financial hardship (Financial hardship), and changes in socializing with others (Socializing change),
- Model 2 (run twice, once per phase) was adjusted for covariates related to demographic and work characteristics. As in (Spiro et al., 2021, p. 5), demographic and arts work variables were: "gender, age, ethnicity, living status (Living alone), self-rated health (Health), exercise habits prior to COVID-19 (Pre-COVID-19 exercise), educational attainment (Ed. Attainment), art specialism, household income (Household income), percentage of time spent freelancing (% freelance), individual contribution to household income (% Cont. income), and the percentage of one's individual contribution to household income generated from arts work specifically (% Cont. art)" (Appendix F details these variables as well as the assumptions checked).

3. Results

Using the data from the two cross-sectional surveys from August 2020 and October 2021, in the following section we present the perceived changes in work patterns, experiences of financial hardship, loneliness, and anxiety. This provides context for the first research question (What are the contributors to arts professionals' mental and social wellbeing in two snapshots during the pandemic in China?). This is followed by presentation of results that respond to the second research question (To what extent do artists seeing themselves as having a future working in the arts in China?).

3.1. Changes in work patterns

As expected, given the closing of cultural venues, work associated with in-person activities dropped dramatically in Phase 1 (e.g., 84% of performers spent less time performing, Appendix D). Although there was an uptick in other activities, even the highest increase (researching, n = 47%) was not by the same magnitude. By Phase 2, 68% of respondents were still *performing* less than before the pandemic, 61% of researchers were *researching* more than before the pandemic, and 87% of those *teaching/coaching/workshop leading/mentoring* saw an uptick in their work in these areas.

3.2. Financial hardship, loneliness, and anxiety

Almost half of the respondents (n = 233, 46%) considered themselves to be in financial hardship as a result of the pandemic in Phase 1, rising to 58% (n = 291) in Phase 2. In Phase 1, 51% reported increased anxiety, and 47% reported being lonelier than before the pandemic. In Phase 2, 47% reported being more anxious and 43% reported being lonelier than before the pandemic (Fig. 1, See also Tables D.5 and D.6 in Appendix D).

3.3. Mental and social wellbeing and their associated variables

As detailed in Appendix E, following the scoring in the MHC-SF scale, about half the respondents reported "flourishing" (51% and 50% in Phases 1 and 2, respectively), fewer were experiencing "moderate" levels of wellbeing (45% and 47% in Phases 1 and 2, respectively), while only 4% were "languishing" in both phases on the 14-item MHC-SF scale. Following the scoring on the 8-item CES-D scale, nineteen percent of respondents crossed the threshold for being described as depressed by reporting three or more depressive symptoms on the in both phases (Karim et al., 2015); the mean score was 1.23 and 1.09 in the two phases, respectively (out of 8; SD = 1.83 and 1.63 respectively). The mean score for social connectedness was 47.0 and 50.0 in the two phases respectively (out of 75; SD = 7.0 and 10.92, respectively) on the 15-item Social Connectedness Scale-Revised. Following the scoring on the Three-Item Loneliness Scale, 13% and 24% of the respondents in the two phases respectively, were classed as lonely, scoring 6 or more out of a possible 9, with average scores of 4.08 and 4.55 in the two phases respectively (SD = 1.30 and 1.39 respectively). In both phases, the correlations between all four outcome measures (Appendix E; Table E.5 and Table E.6) were in the low to moderate range (Mukaka, 2012) suggesting that these measures are capturing different aspects of symptoms of mental and social wellbeing.

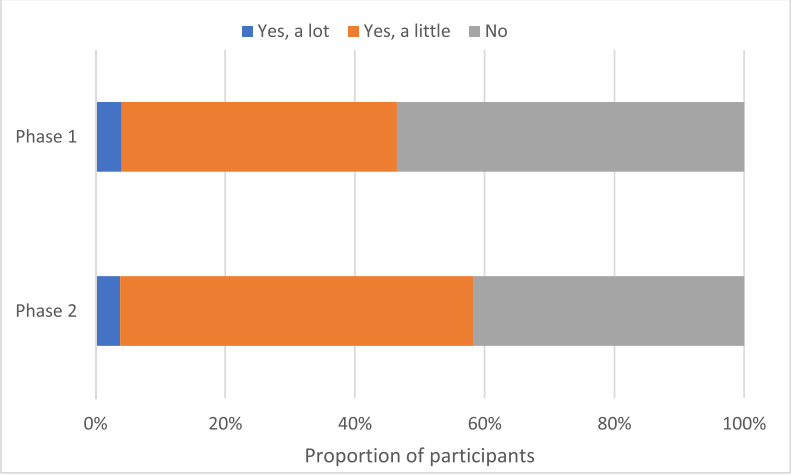
With this pattern of scores on the outcome measures as a basis, what are the contributors to arts professionals' mental and social wellbeing in two snapshots during the pandemic in China? (Research question 1). Four regression models were run for each phase, exploring which factors were predictive of outcomes in mental and social wellbeing. Model 1 (including the three factors related only to COVID-19) predicted between 7–11% of the variance in the outcome scores for Phase 1 and 4–8% of the variance in the outcome scores for Phase 2 (Appendix F; Tables F.1-F.8). The fully adjusted model (Model 2, which included the demographic and work characteristics) explained for Phase 1, 10%–24% of the variance in the outcome measure scores. More specifically, for Phase 1, the model explained 24% of the variance in wellbeing (MHC-SF, adjusted $R^2 = 0.224$, $F_{15,\ 484} = 10.6$, $p < .001$), 21% in depression (CES-D, adjusted $R^2 = 0.210$., $F_{15,\ 484} = 9.6$, $p < .001$), 11% of the variance in social connectedness (Social connectedness scale, adjusted $R^2 = 0.11$, $F_{15,\ 484} = 5.3$, $p < .001$), and 10% in loneliness (Three-Item Loneliness Scale, adjusted $R^2 = 0.10$, $F_{15,\ 484} = 4.8$, $p < .001$). For Phase 2, this explained 26% of the variance in wellbeing (MHC-SF, adjusted $R^2 = 0.26$, $F_{15,\ 484} = 12.7$, $p < .001$), 33% of the variance in depression (CES-D, adjusted $R^2 = 0.33$, $F_{15,\ 484} = 17.1$, $p < .001$), 25% of the variance in social connectedness (Social connectedness scale, adjusted $R^2 = 0.25$, $F_{15,\ 484} = 12.2$, $p < .001$), and 19% of the variance in loneliness (Three-Item Loneliness Scale, adjusted $R^2 = 0.19$, $F_{15,\ 484} = 8.8$, $p < .001$).

Overall, self-rated health is the most consistent predictor of scores on the mental and social wellbeing outcome measures. In both phases, reporting being in better health is associated with higher scores on mental wellbeing (Phase 1, $B = 5.99$, $p < .001$, Phase 2, $B = 6.11$, $p < .001$) and social connectedness (Phase 1, $B = 1.63$, $p < .001$, Phase 2, $B = 3.56$, $p < .001$) and lower scores (indicating lower levels) on depression (Phase 1, $B = -0.69$, $p < .001$, Phase 2, $B = -0.88$, $p < .001$) and loneliness (Phase 1, $B = -0.25$, $p = 007$, Phase 2, $B = -0.47$, $p < .001$).

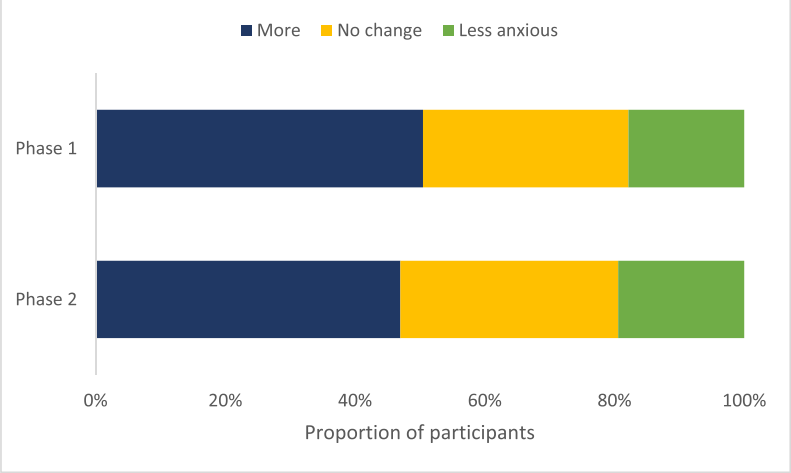
In both phases being in financial hardship is associated with lower scores on the mental health continuum (Phase 1: $B = -3.75$, $p < .001$, Phase 2: $B = -3.36$, $p < .001$), and higher scores on the depression scale

[3] A redacted data set is publicly available at xxxx.

(a) Proportion of respondents who considered themselves to be in financial hardship as a result of the pandemic



(b) In the last month, how has the public health situation affected how anxious you feel?



(c) In the last month, how has the public health situation affected how lonely you feel?

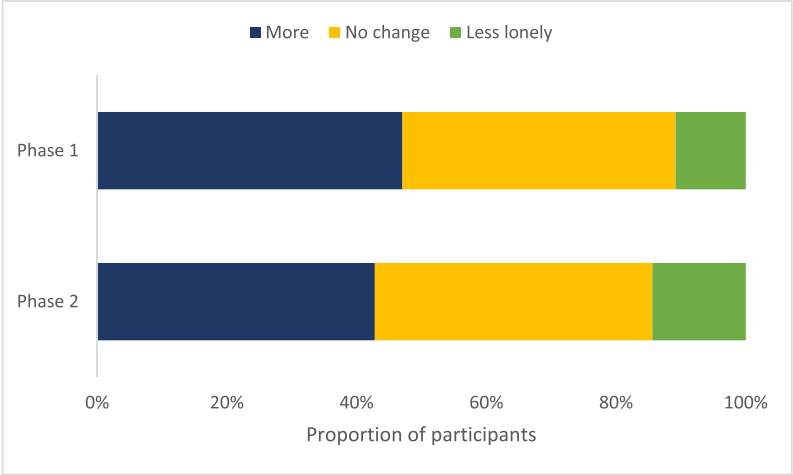


Fig. 1. Respondents' sense of (a) financial hardship, (b) anxiety, and (c) loneliness (See also Tables D.5 and D.6 in Appendix D).

(Phase 1: $B = 0.75$, $p < .001$, Phase 2: $B = 0.64$, $p < .001$) and higher scores on the loneliness scales (Phase 1, $B = 0.42$, $p < .001$, Phase 2: $B = 0.48$, $p < .001$). In Phase 2, being in financial hardship is associated with lower scores on the social connectedness scale ($B = -4.10$, $p < .001$). Similarly, higher household income is associated with lower scores on the depression ($B = -0.06$, $p = .005$) and loneliness scale ($B = -0.05$, $p = .004$) and higher scores on social connectedness ($B = 0.52$, $p = < .001$) in Phase 2.

We also find that an increase in physical activity during the month prior is associated with higher scores on mental health in Phase 2 ($B = 0.84$, $p = .036$) and social connectedness in both phases (Phase 1: $B = 0.63$, $p = .012$, Phase 2: $B = 0.74$, $p = .39$). In both phases we find that more physical activity pre-COVID-19 is associated with lower scores on mental health (Phase 1: $B = -0.96$, $p < .001$, Phase 2: $B = -0.98$, $p < .001$) and social connections (Phase 1: $B = -0.36$ $p < .001$, Phase 2: $B = -0.90$, $p < .001$) and higher scores on the depression scale in phases 1 and 2 (Phase 1: $B = 0.07$, $p = .004$, Phase 2: $B = 0.09$, $p = .002$).

In Phase 1, more socializing is associated with higher scores on mental wellbeing ($B = 0.65$, $p = .005$) and social connectedness ($B = 0.76$, $p < .001$) and lower scores (indicating lower levels) on depression ($B = -0.18$, p < .001). In Phase 2, this is no longer a significant factor, which may be connected to the timing of the surveys.

By Phase 2, identifying as male ($B = -3.41$, $p < .001$), living alone ($B = -3.90$, $p < .05$), and being more highly educated ($B = 3.18$, $p < .05$) are associated with higher scores on mental health. Older age is associated with reduced likelihood of scoring as depressed ($B = -0.03$, p < .05) or lonely ($B = -0.02$, $p < .05$). Finally, household income is associated with higher scores on the social connectedness scale ($B = 0.52$, p < .001) and lower scores on the CES-D ($B = -0.06$, p < .005) and loneliness scale ($B = -0.05$, p < .005).

3.4. Future in the arts

To address research question 2 (To what extent do artists seeing themselves as having a future working in the arts in China?), we asked respondents in Phase 2 whether they anticipate a future for themselves working in the arts and cultural sectors (see Appendix A, *HEartS Professional China Survey*, question 4.11).

As is detailed in Table 1, although two-thirds ($n = 328$, 66%) saw themselves with a future working in arts right now, 34% of the respondents chose options with caveats or were more cautious: 13% saw a future for themselves in the arts but not at the moment, 19% "maybe" saw a future for themselves, and 2% did not see a future for themselves in the arts.

4. Discussion

The results of these two cross-sectional surveys, completed by two sets of 500 respondents, indicate that health, physical activity, financial situation, and socializing affected several of the outcome measures in at least one of the two phases. The prominence of self-rated health and physical activity seen here aligns with research that has identified the importance of health for people working in the performing arts (Araújo et al., 2020; Cahalan & O'Sullivan, 2013; Donohue et al., 2018) and during COVID-19 (Wood et al., 2020; Spiro et al., 2021). The relationship between pre-COVID-19 physical activity and worse outcomes may be connected to the nature of the lockdowns and restrictions in China. Daily life changed substantially during this period, and it may be that respondents who had previously physically active lives had their activities curtailed (Zhu et al., 2021). The association between financial hardship and feelings of mental ill-health, taken together with the importance of household income for all measures except mental wellbeing, indicate the importance of financial situation for mental and social wellbeing.

Table 1
Responses to the question: "Do you anticipate a future for yourself working in the arts and cultural sectors?"

		n	%
Yes	… purely in the arts	118	24
	… in the arts alongside non-arts work	210	42
Yes, but not at the moment	… purely in the arts	17	3
	… in the arts alongside non-arts work	48	10
Maybe	… in the arts alongside non-arts work	78	16
Maybe, but not at the moment	… in the arts alongside non-arts work	17	3
No		12	2

In response to research question 2, two-thirds of respondents saw themselves with a future working in arts at present. However, one third were more cautious, seeing a future for themselves in the arts but not currently, "maybe" seeing a future for themselves, or indeed not seeing a future for themselves in the arts at all.

By the second phase there had been at least some adaptation with an increase in focus on teaching, coaching, workshop leading, mentoring, and researching while performing was still not possible. Indeed, for arts professionals, particularly performing artists in the post-pandemic era, the skills of online teaching and of operating personal media channels becoming increasingly important. An example of this transition is demonstrated by the Chinese violinist Ning Feng (Ning, 2022) who opened his own WeChat and Bilibili official channels and started giving online masterclasses during the pandemic, although he did explain that he disliked online teaching because of the limited sound quality and real-time capability. In the two years, most of his concert tours were cancelled or postponed, but his own media channels reached millions of views and his online masterclasses were participated in by thousands of paid subscribers.

However, adaptations in terms of type and or turning to online work did not appear to prevent experiences of financial hardship, with over half of the respondents experiencing financial hardship by Phase 2. This was accompanied by around 40%–50% of respondents reporting increased anxiety and/or loneliness compared with before the pandemic. These results suggest that though there were new policies in place, many arts professionals were struggling by Phase 2. Indeed, even before the pandemic, working solely in the arts was not straightforward. The results of a pre-pandemic survey in China (published in 2016) indicated that over 70% of graduates of performing arts degrees had to leave, at least partly, their work due to difficulties with employment, with only 27% thinking that they will purely work in the arts (Xu, 2019). With almost a third of respondents in the current study not being sure that they will remain working in arts, the results of the current surveys suggest that retaining arts workers in this area needs attention.

4.1. Comparison with snapshots from the United Kingdom

HEartS Professional: China is an adaptation of *HEartS Professional,* a survey tool we developed during COVID-19 in the UK and through which we collected cross-sectional data in April-June 2020 (Spiro et al., 2021) and April-May 2021 (Spiro et al., 2023). The two cross-sectional studies are different in key aspects: most obviously geographic location and timing during the pandemic. However, some of the findings seem consistent across the different samples. For example, the reduction in work and the proportion of people reporting financial hardship reported in the current study align with the data collected in the UK. Similarly, as in this study, in regressions carried out with both phases of data collection in the UK, higher self-rated health was associated with higher wellbeing and lower depression scores and an increase in physical activity during the last month was associated with higher wellbeing and social connectedness scores.

However, there are also some striking differences. In the UK studies we found that more physical activity pre-COVID-19 was associated with higher wellbeing and social connectedness scores, as well as lower loneliness scores ((Spiro et al., 2021; Spiro et al., 2023). In the current study, however, the relationships, where they are significant, are

reversed: with more exercise before the pandemic being associated with *lower* scores on mental health and social connections and *higher* scores on the depression scale. This may be connected to the tighter restrictions experienced in China compared with those in the UK, disrupting even more extremely individuals' ability to continue their pre-pandemic routines.

Experience of increase of anxiety and loneliness is at lower rates in China than in the UK. For example, compared with the rates seen in this study being between 40% and 60%, in the UK studies we saw 85% and 71% experiencing increased anxiety and 63% and 64% experiencing increased loneliness in the two phases, respectively (Spiro et al., 2021; Spiro et al., 2023). Similarly, there were lower rates of depression and loneliness on the CES-D and Three-Item Loneliness Scale in China compared with the sample in the UK (Spiro et al., 2021; Spiro et al., 2023). For example, looking at the depression scale, compared with the 19% reaching the threshold for depression in the study in China, 69% and 73% reported depressive symptoms on the CES-D in the two UK phases (Spiro et al., 2021; Spiro et al., 2023). Other studies have also used the CES-D in China and found it to be reliable and valid (e.g., Zhang et al., 2010; Zhang et al., 2012; Liu et al., 2020), and the diagnostic criteria for depression as represented in the Diagnostic and Statistical Manual of Mental Disorders IV (DSM IV) have been found to be applicable in China (Kendler et al., 2015). The findings of the *HEartS Professional* surveys appear to be in line with patterns in national rates that were found during the pandemic. For example, the rates of depression at the start of the pandemic in China were lower than those in Europe or the USA during the pandemic (Liu, 2022).

Looking at the loneliness scale, compared with the 13% and 24% reaching the threshold for loneliness in the two phases of the study in China, 41% and 53% did so in the UK phases, respectively (Spiro et al., 2021; Spiro et al., 2023). In comparison with other studies, the average loneliness scores in this study are a little higher than found among older people in China (Liu et al., 2020), where the average score was 3.9 with a standard deviation of 3.0. The rates of loneliness in Phase 2 in the data from China seem comparable to other studies of loneliness in China. One such study published in 2016 with older people found a prevalence of 28% among women and 23% among men (Dong & Chen, 2016). A nationwide cross-sectional survey study of loneliness carried out earlier in the pandemic (January-February 2020), 24% of the respondents reported feeling lonely in recent days (Bao et al., 2021). Though the 13% rate seen on the Three-Item Loneliness Scale in Phase 1 seems low in comparison to this, it is exactly in line with the 24% who reported feeling lonely in Phase 2.

It is possible then that the findings in the *HEarts Professional* surveys are reflecting a wider trend – and differences in trends – in the two countries at the time of the pandemic. It was seen internationally that members of the public found ways of connecting during these otherwise physically distanced times (such as seen in the weekly "claps for carers" in the UK (Manthorpe et al., 2022)). As experienced by the Chinese authors on this paper, the new circumstances provided previously uncommon opportunities for neighbours to communicate with each other in WeChat groups and in person, especially when everyone was lining up for nucleic acid tests, which was, in many cases, the very first time that individuals could meet everybody from a community. More research is needed to explore whether and how these patterns continue and what exactly might be underlying them.

It may be that geographic and cultural contexts play a role in arts professionals' experiences. For example, authors have suggested that differences in rates of loneliness can connect with the broader cultural contrast between societies typically described as individualistic – in which "people behave according to self-interest and personal preferences and consider independence and self-sufficiency very important" (Fatehi et al., 2020, p. 11) and societies that are typically described as collectivist – in which "groups are of primary importance—individuals are secondary. In these cultures, individuals acknowledge the contributions of others to their existence. They may sacrifice self-interest to promote the interest of the collective" (Fatehi et al., 2020, p. 11). Previous studies have suggested that countries with more individualistic societies can have higher rates of loneliness than more collectivistic societies (e.g., Barreto et al., 2021) and cultural context like this may have an impact on how other aspects of arts professionals' feelings of mental and social wellbeing, or feelings of having a future in the arts can be addressed. However, studies have identified the complexities of describing societies as individualistic and collectivistic in terms of the philosophical roots of the definitions (Lu, 1998; Barreto et al., 2021), in terms of the definitions themselves, underlying theory, and empirical analysis (Fatehi et al., 2020), as well as in terms of changes in society (Lu, 1998). As we have seen in this study, this area requires further research to understand patterns, their contributors, and the connection with societal structures.

Other geographic and cultural contexts may also play an important role. Several features may influence performing artistits' work and wellbeing. These can include economic characteristics, the genres of dominant arts, and the geographic spread of arts professionals. As our data do not explore these characteristics, we briefly here provide examples of the changes, genres, and geographic features of arts professions in China to provide a sense of the context for the data. As discussed by Zhang et al. (Zhang et al., 2020), the Chinese context is one with a fast growing economy and an emerging center of cultural consumption where official statistics report that the number of performing-arts institutions had increased dramatically from 2619 in 2000 to 17,123 in 2018 (Zhang et al., 2020, p. 7) as had the gross revenues of these performing-arts institutions (as reported by the Ministry of Culture and Tourism, 2019). In terms of genre, "the most popular artistic genres in mainland China are those targeting at mass, especially family-type, consumers, including instrumental concert, family art and theater" (Zhang et al., 2020, p. 8). More broadly, the performing arts in China are a mixture of traditional performances and more modern shows, accompanied by the emergence of performing arts brands and centers" (Zhang et al., 2020, p.41). Georgraphically, though Beijing and Shanghai have the highest number of performing arts events and there are differences between cities in the dominance of foreign imported performing arts and Chinese traditional art genres, "[t]he nationwide distribution of performing arts events indicates that the consumption of performing arts in China is no longer a privilege enjoyed only by the residents of a few top-tier cities … China's performing arts market is expanding rapidly from a few cultural hubs into a wide range of lower-tier cities" (Zhang et al., 2020, p. 8). All these factors, and more, could be influencing and changing the experience of performing arts workers in different parts of China. Further work is needed to fully explore the connection between geographic and cultural contexts, and arts workers' experiences.

4.2. Limitations and looking to the future

As mentioned above, we intended for this study to be longutidinal, but a technical error meant that this was not possible and we see some differences between the two cross-sectional samples used. For example, we see a younger group with a broader distribution of arts professions in Phase 2 and the gender balance is different in each phase. Therefore, rather than being a longitudinal study, we present two snapshots, and the differences in results between them cannot be ascribed purely to the period during which the data were collected. In addition, although we went through a process of adapting this survey from the UK to the Chinese contexts, had the survey been developed in China first there may have been different emphasis and areas of focus. For example, there may have been different perspectives on wellbeing (e.g., Yang & Zhou, 2017) or particular focus on freelance workers' experiences (Lee et al., 2021), or different geographic characterisations. Indeed, although both samples included freelance workers, there were very few respondents that were 100% freelance. The differences in support provided to differently employed members of the cultural sector discussed above

suggests that future work should urgently explore the impact on freelance arts workers.

This study highlights the importance of carrying out studies in different international contexts to understand commonalities and differences across social, cultural, or geographic areas. The regression models appear to be robust, with very similar overall patterns observed over time and in these two different parts of the world. This prepares us well for investigating different relationships. For example, the different relationships between exercise and social and mental wellbeing, or the differences in scores on loneliness and depression suggest that there is scope for further exploration of these factors and relationships.

This first study on this topic in China prepares the ground for more detailed interrogation of professional artists' work and wellbeing in China such as of comparisons between urban and rural contexts, comparisons between different cities, and investigation of how the situation continues to change (Zhang et al., 2020). For example, further work exploring contributors to career intentions is needed to complement the first steps undertaken. A recent study identified several key contributors to music performance students' career intentions including confidence to enter the industry ("self-efficacy"), which is contributed to by perceived social support, outcome expectation, autonomous motivation, and carrier barriers (Zhang et al., 2020). The extent to which these considerations generalise across the performing arts is an open question.

Indeed, the results of this study suggest that there are several issues that would benefit from longitudinal attention across the performing arts sector. The consistency of the prominence of health, physical activity, and finances suggests that these patterns may indeed outlast the pandemic. However, longitudinal work is essential both to ascertain whether this is the case and to trace the work and wellbeing of the 13.5 million arts professionals in China with whom limited research has been conducted. Similarly, that almost a third of respondents reported that they were not sure of their future in the arts suggests that research on retention of arts workers is an essential future research avenue, especially when compared with the relevant statistics from other countries, which may in turn provide routes for optimizing public policy as well as understanding the situations in different social systems.

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CRediT authorship contribution statement

Neta Spiro: Conceptualization, Data curation, Formal analysis, Funding acquisition, Project administration, Supervision, Visualization, Writing – original draft, Writing – review & editing. **Jian Yang:** Conceptualization, Funding acquisition, Supervision, Writing – review & editing. **Caitlin Shaughnessy:** Data curation, Formal analysis, Software, Visualization, Writing – original draft, Writing – review & editing. **Churan Luo:** Methodology, Writing – review & editing. **Rosie Perkins:** Methodology, Conceptualization, Funding acquisition, Writing – review & editing. **George Waddell:** Methodology, Funding acquisition, Writing – review & editing. **Aaron Williamon:** Conceptualization, Funding acquisition, Writing – review & editing.

Declaration of competing interest

The authors of the paper "Work and Wellbeing Among Arts Professionals in China during COVID- 19 (August 2020 and October 2021)" have no competing interests to declare.

Data Availability Statement

The data files for this project are available from on the Dryad database, with some data redacted to follow Dryad's protocols, at: A. Williamon, N. Spiro, J. Yang, C. Shaughnessy, C. Luo, G. Waddell, R. Perkins, (2023) HEartS Professional Survey: Charting the effects of COVID-19 on working patterns, income, and wellbeing among arts professionals in China (October 2020, August 2021) [Dataset], Dryad, https://doi.org/10.5061/dryad.r2280gbk0.

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Appendix A-F. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.ssaho.2023.100691.

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