

# Psychological Services

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# Wellness Program Preferences and Associated Factors Among Chinese Health Care Professionals During the COVID-19 Pandemic

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There is a dearth of information on wellness program preferences and influencing factors among Chinese health care professionals (HCPs). This study begins to establish a foundation for wellness programming for HCPs in China, especially during public health crises. It sought to (a) examine differences in wellness program preferences across the COVID-19 pandemic phases; (b) identify wellness program patterns and preferences; and (c) explore the influence of sociodemographic and psychological factors on these preferences. One hundred eighty participants (mean age of  $33.1 \pm 7.8$  years) were HCPs from two hospitals in China who completed a battery of measures regarding preference for wellness programs (Wellness Programming Preferences Questionnaire), psychological symptoms (Patient Health Questionnaire–9; Depression, Anxiety, and Stress Scale–21), attitudes about professional help-seeking (Attitude Toward Seeking Professional Psychological Help–Short Form), and coping styles (Simplified Coping Style Questionnaire). Findings revealed that interactive and interpersonal wellness programs were preferred consistently throughout the pandemic. Peer support outreach (53.1%) and various onsite interactive programs, including wellness programming activities (50.6%), relaxation groups (46.7%), and in-person counseling (41.1%), were among the most preferred options. Further, HCPs with higher levels of help-seeking attitudes,  $t(145) = 3.28, p = .001$ , and positive coping styles,  $t(154) = 2.70, p = .008$ , endorsed higher preferences for an array of wellness programs. Our findings underscore the importance of developing and implementing interactive and interpersonally focused wellness programs to enhance the psychological well-being of Chinese HCPs. Future research should evaluate the effectiveness of culturally sensitive wellness programs for HCPs and compare wellness programming preferences worldwide.

## Public Significance Statement

Interactive and interpersonal wellness programs, such as peer support outreach, relaxation groups, and in-person counseling, are most valued by health care professionals in China. Health care professionals who are open to seeking help and who adopt positive coping styles are most receptive to an array of wellness programming options.

**Keywords:** Chinese health care professionals, wellness program preferences, help-seeking attitudes, positive coping

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*continued*

The psychological well-being of health care professionals (HCPs; e.g., physicians and/or nurses) increasingly is being recognized as a critical public health concern due to its impact on quality patient care and safety (O'Connor et al., 2020; Søvold et al., 2021). HCPs in China face unique challenges to their psychological well-being due to work-related stressors that are intensified by severe health care workforce shortage and uneven resource distribution across its large population (G. Chen et al., 2021; Xia et al., 2021). Not surprisingly, therefore, research has highlighted historically high levels of mental health symptoms and low levels of well-being among Chinese HCPs, including but not limited to anxiety, depression, burnout, sleep disturbances, and low job satisfaction and quality of life (Asante et al., 2019; Y. Liu et al., 2019). The onset of the COVID-19 pandemic exacerbated the psychological burden on Chinese HCPs by bringing in a myriad of unprecedented stressors, such as the influx of infected patients and associated high risk of exposure to the virus, elevated levels of stress, lack of personal protective equipment, physical and emotional exhaustion, and moral injury (J. He et al., 2021; M. Li et al., 2022; Que et al., 2020).

As Chinese HCPs were forced to expand beyond their capacities in the context of the pandemic, they experienced a mental health crisis (S. Zhang et al., 2024). A systematic review of 22,000 HCPs across China during the pandemic revealed high rates of clinically significant symptoms of anxiety (27.0%), depression (26.2%), stress (42.1%), and sleep disturbances (34.5%; H. Zhang et al., 2021). Demographic and work-related factors, such as gender (female), age (younger), professional type (nurses), and front-line work in high-infection areas increased HCPs' risk for psychological distress and reduced quality of life (M. Li et al., 2024; Sun et al., 2021). The alarmingly high rates of mental health challenges among Chinese HCPs have posed an unparalleled burden on health care systems throughout China. Several studies with Chinese HCPs have indicated low job satisfaction, low quality of life, and high turnover intention, worsening the trends that began even before the pandemic (C. Z. Cai et al., 2021; R. He et al., 2020; M. Li et al., 2024). Taken together, these findings underscore the importance of continuing to sustain the health care workforce by prioritizing and protecting HCPs' well-being.

Recognizing the urgency of addressing this public health challenge, system-level prevention and intervention measures were implemented in China during the pandemic. At the onset of the pandemic, the National Health Commission of China issued the Guidelines for Emergency Psychological Crisis Interventions and allocated mental health resources for HCPs, including providing virtual counseling services (via phone or video call; Hu & Huang, 2020). Various provinces and cities launched 24/7 psychological support hotlines via WeChat in response to the National Health Commission of China guidelines. Online psychoeducational materials and self-help interventions for managing mental health concerns (e.g., anxiety, depression, insomnia) were made available to HCPs and the general

public on various Chinese social media platforms (e.g., WeChat, Weibo, TikTok; S. Liu et al., 2020). Mental health providers and organizations formed expert teams that were stationed at isolated hospitals to provide on-site psychological support and services (W. Li et al., 2020). To help HCPs relieve their psychological distress related to the COVID-19 outbreak, hospitals undertook various measures such as having psychological crisis intervention teams; offering online screening, referral, and treatment for HCPs with serious psychological problems; and providing online group therapy (Z. Liu et al., 2020).

Despite the resources and support implemented for HCPs during the pandemic, there is a dearth of research assessing HCPs' wellness program preferences. One study conducted at the initial stage of the pandemic revealed that HCPs in New York preferred having access to individual therapists (33%), followed by online support groups led by clinicians (24%), mental wellness videos (15%), and online general wellness groups (14%; Shechter et al., 2020). No studies have examined Chinese HCPs' wellness program preferences and the associated factors.

To understand the wellness program preferences of HCPs in China, this study aimed to (a) identify wellness program preferences, (b) examine differences in these preferences between the early/acute (December 2019 to April 2020) and later/chronic (May 2020 to March 2022) phases of the COVID-19 pandemic, and (c) explore whether sociodemographic (e.g., age, gender, professional type, work setting) and psychological factors influence HCPs' wellness program preferences. We hypothesized that (a) wellness programs that were more interpersonal and interactive in nature would be preferred more than those programs that are more educational and minimally interactive; (b) different wellness programs would be preferred in the various phases of the pandemic, such that programs that facilitate interpersonal connections would be more preferred with the progression of the pandemic due to the feelings of isolation that emerged in response to the lockdowns; and (c) psychological but not sociodemographic factors would influence wellness programming preferences, such as HCPs with more psychological distress and more willingness to seek professional support would be more interested in wellness programs.

## Method

### Participants

The sample, which was obtained through voluntary sampling, included 196 HCPs who were recruited from two large urban public hospitals in East and Central China (Hospital A and Hospital B). The only inclusion criterion was self-identification as an HCP. There were no exclusion criteria. Among the 196 participants who consented to participate, 180 provided valid responses that were used for this analysis. Specifically, 16 HCPs were excluded from the analyses due to their straight-lining response pattern on one study measure, Attitude Toward Seeking Professional Psychological Help–Short Form (ATSPPH-SF),

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which includes reverse-coded items. There were no missing data in this data set, except for five missing values in age.

## Procedure

The study was determined to be exempt by the Institutional Review Board (IRB No. STUDY00003524) of a university in the Southeastern United States. This determination involved obtaining study support and cultural context letters from both study sites in China to ensure the design and procedures were culturally appropriate. This process was facilitated by the members of our research team and article coauthors who are HCPs, scholars, and administrative leaders in the two study sites. These coauthors also partnered with hospital leaders, who in turn promoted and encouraged study participation. In addition, the study was conducted in accordance with the China Data Privacy Law.

WeChat, a popular social media and messaging app in China, was used to recruit participants. Study measures were sent via WeChat to all HCPs. The battery included seven measures that were distributed via an online research questionnaire platform in China, *Wenjuanxing*. Five of the measures were used to address the present study questions. Each participant was first directed to complete the informed consent process online. After endorsing “yes” to participating in the study online via answering the questionnaires, participants were directed to complete the study battery. Upon completion, participants were compensated with a virtual gift card in Renminbi (equivalent to \$10 U.S. dollars) according to the daily currency exchange rate when the data were collected. This compensation rate, advised by the leadership of our study sites in China, is considered culturally appropriate for the required level of research participation in China.

## Measures

All measures are culturally appropriate and relevant and were presented in Simplified Chinese language (Mandarin). Four measures have been shown to have good reliability and validity with prior samples in China (H. Chen et al., 2020; Wang et al., 2014; Xie, 1998; Yi & Da-Xing, 2012), and the fifth measure, the Wellness Programming Preferences Questionnaire (WPPQ), was created specifically for this study. Pilot testing of the assessment battery was performed with 15 adults in China to ensure the appropriateness and relevance of the survey duration and content.

### Wellness Programming Preferences Questionnaire

The WPPQ was designed for this study to assess the preferences HCPs have toward specific wellness programming activities. The WPPQ contains 10 items, with the first nine items indicating various types of wellness programming and the last item asking respondents to provide additional preferred wellness programming that was not included in the measure. Examples of wellness programming include “free hotlines or text lines to contact during times of crisis” and “onsite wellness programming activities (e.g., yoga, mindfulness).” Participants responded with their preference level for each item using a 3-point Likert scale, with 1 indicating *very much preferred*, 2 denoting *somewhat preferred*, and 3 representing *not at all preferred*. The WPPQ queried about programming preferences during two phases of the COVID-19 pandemic (early/acute phase: December 2019 to April 2020; later/chronic phase: May 2020 to March 2022).

### Patient Health Questionnaire–9

The nine-item self-report Patient Health Questionnaire–9 (PHQ-9) was utilized to assess the severity of depressive symptoms (Kroenke & Spitzer, 2002). Each of the PHQ-9 items is rated from 0 (*not at all*) to 3 (*nearly every day*). The total score can range from 0 to 27, with four levels of scores: mild depressive symptoms (5–9), moderate depressive symptoms (10–14), moderately severe depressive symptoms (15–19), and severe depressive symptoms (>20). The PHQ-9 has been widely used in many countries, including China, and has excellent psychometric properties in the Chinese population (Wang et al., 2014). The Cronbach’s  $\alpha$  for the present study was .92.

### Depression and Anxiety Stress Scale—Chinese Version

Another measure used to assess symptoms of psychological distress was the Depression and Anxiety Stress Scale (DASS-21; Yi & Da-Xing, 2012). This 21-item instrument asks participants to rate their negative emotional states of depression, anxiety, and stress in the past week. Each item is rated using a 4-point Likert scale (0 = *did not apply to me at all* to 3 = *applied to me very much or most of the time*). The total score can range from 0 to 126 and is calculated by adding up all the items from each subscale and multiplying by two. A higher total score indicates more severe depressive, anxious, and/or stress symptoms. A total score  $\geq 60$  is considered an indication for further psychiatric assessment (Lovibond & Lovibond, 1995). Supported by empirical evidence using a single-factor model when applying the DASS-21 with Chinese HCPs (Jiang et al., 2020; S. Zhang et al., 2024), we adopted the DASS-21 total score for the analyses of this study. The Cronbach’s  $\alpha$  for the present study was .97.

### Attitude Toward Seeking Professional Psychological Help—Short Form

The ATSPPH-SF (Fischer & Farina, 1995) was utilized to measure general attitudes toward seeking professional psychological help among HCPs during the pandemic. Items are self-reported on a 4-point Likert scale (0 = *disagree* to 3 = *agree*) with Items 2, 4, 8, 9, and 10 being reverse scored. The total score can range from 0 to 30 with a higher score indicating more positive attitudes about professional help-seeking, which is also associated with lower levels of stigma against mental illness (Elhai et al., 2008). The Cronbach’s  $\alpha$  for the present study was .70.

### Simplified Coping Style Questionnaire

The Simplified Coping Style Questionnaire (SCSQ; Xie, 1998) is a 20-item measure that was adopted to assess the coping styles of respondents. The SCSQ contains two subscales related to positive (SCSQ-Pos; 12 items, e.g., “Find different ways to solve the problem”) and negative (SCSQ-Neg; eight items, e.g., “Try to forget about the problem”) coping styles. Each SCSQ item is scored on a 4-point Likert scale (0 = *never used* to 3 = *often used*), with a higher score indicating more utilization of the relevant coping strategies. The Cronbach’s  $\alpha$  values for the present study were .94 (SCSQ-Pos) and .83 (SCSQ-Neg), respectively.

## Data Analysis

We conducted data analysis by using R (R Core Team, 2023). For the first research question, descriptive statistics were used to examine wellness program preferences, taking into account preferences from both the early/acute and later/chronic phases of the pandemic. To examine the second question regarding whether HCPs' wellness programming preferences remained consistent throughout different phases of COVID-19, intraclass correlation of the WPPQ was calculated for the responses between the early/acute phase and later/chronic phase. To interpret an intraclass correlation value, we followed the standard cutoffs proposed by Portney: poor (<.5); moderate (.5–.75); good (.75–.9); and excellent (>.9; Portney, 2020).

For the third research question, we used K-Medoids clustering (Kaufman & Rousseeuw, 2009) to identify different groups of HCPs based on their preferences for wellness programs. K-Medoids clustering, a variation of K-Means clustering, is an unsupervised clustering algorithm that classifies groups of relatively homogeneous data points by identifying representative responses within a data set. K-Medoids clustering uses medoids as a center of the cluster and minimizes the sum of pairwise dissimilarities. We chose to use K-Medoids clustering for our analysis as this feature enhances the human interpretability of computationally generated clusters. Since K-Medoids clustering is not able to determine the optimal number of clusters by itself, we decided on the number of clusters based on statistical methods (i.e., silhouette method; Rousseeuw, 1987) and gap statistic (Tibshirani et al., 2001) along with the interpretability of the result. After obtaining the groups from K-Medoids clustering, we examined group differences in sociodemographic variables (i.e., age, gender, highest education, health care profession, direct experience in working with COVID-19 patients, work setting, and site), mental health variables (PHQ-9, DASS-21), help-seeking attitudes (ATSPPH-SF), and coping styles (SCSQ-Pos, SCSQ-Neg). Group differences for continuous variables were examined by Welch's *t* test, following the suggestion of Delacre et al. (2017). For categorical variables, we used Fisher's exact test for group comparisons.

## Results

### Descriptive Analyses

Table 1 presents participant characteristics, including 58.9% recruited from Hospital A (*n* = 106) and 41.1% from Hospital B (*n* = 74). The mean age of participants was 33.1 (standard deviation [*SD*] = 7.8) years, with a majority being female (*n* = 141, 78.3%). Most participants were nurses (*n* = 135, 75%) or doctors (*n* = 36, 20%), 82.2% held a bachelor's degree (including a medical degree), and 68.9% worked primarily in an inpatient setting. Table 2 shows the means, *SD*s, and correlations among the study variables.

### Wellness Program Preferences

We used the percentage of participants who "very much" preferred each specific wellness program (rated the program a 1 on the WPPQ) to evaluate participants' wellness program preferences. Table 3, Combined column (includes participants from both hospitals), details the percentage of HCPs who indicated they "very much" preferred for each of the nine programs listed in the WPPQ. Those programs that were ranked as "very much" preferred by 40% or more of the participants were considered to be the most preferred programs. The

**Table 1**  
*Participant Characteristics*

Demographic Variable	<i>N</i> (%)
Gender	
Female	141 (78.3)
Male	39 (21.7)
Highest education	
High school or below	1 (0.6)
Associate degree	12 (6.7)
Bachelor's degree <sup>a</sup>	148 (82.2)
Master's degree	16 (8.9)
Doctorate degree	3 (1.7)
Health care profession	
Doctor	36 (20.0)
Nurse	135 (75.0)
Nursing assistant	5 (2.8)
Medical intern students	4 (2.2)
Work setting	
Primarily outpatient	8 (4.4)
Primarily inpatient	124 (68.9)
Other	48 (26.7)

<sup>a</sup> In China, a medical degree is typically considered equivalent to a bachelor's degree.

most preferred programs were peer support outreach (53.1%), followed by onsite wellness activities (50.6%), onsite relaxation groups (46.7%), onsite in-person counseling (41.1%), and onsite counseling provided via text or mobile applications (40.8%). Conversely, participants showed a lower level of preference for programs such as crisis hotlines (36.4%), wellness and stress management apps (32.8%), wellness lectures (31.1%), and psychoeducational materials available online (28.9%). In response to the free text question about additional wellness programming recommendations, 29 participants noted one or more of the following suggestions: working out and doing sports (e.g., yoga, basketball, swimming, running, aerobics, jumping rope, taking walks), reading, watching TV or online videos or movies, chatting online with friends, cooking, spending time in nature, listening to music, shopping, eating tasty food, drawing, singing, listening to online lectures, watching Cherry blossoms, and practicing Chinese calligraphy. The only recommendations offered by multiple participants related to working out and doing sports.

**Table 2**  
*Means, Standard Deviations, and Correlations of Study Variables*

Variable	1	2	3	4	5	<i>M</i> ( <i>SD</i> )
1. PHQ-9	—	.76***	-.23***	-.08	.33***	6.6 (5.0)
2. DASS-21		—	-.22***	-.15*	.34***	22.5 (22.1)
3. ATSPPH-SF			—	.21**	-.17*	18.1 (4.5)
4. SCSQ-Pos				—	.48***	22.9 (7.7)
5. SCSQ-Neg					—	10.8 (4.9)

*Note.* PHQ-9 = Patient Health Questionnaire-9; DASS-21 = Depression and Anxiety Stress Scale; ATSPPH-SF = Attitude Toward Seeking Professional Psychological Help-Short Form; SCSQ-Pos = Simplified Coping Style Questionnaire-Positive Coping; SCSQ-Neg = Simplified Coping Style Questionnaire-Negative Coping.

\**p* < .05. \*\**p* < .01. \*\*\**p* < .001.



**Table 3***Summary of Responses From the WPPQ: Percentage of Responders Who “Very Much” Preferred the Listed Types of Programs*

WPPQ item	Early/acute phase (%)	Later/chronic phase (%)	Combined (%)
1. Free hotlines or text lines to contact during times of crisis <sup>a</sup>	38.3	34.4	36.4
2. Wellness and stress management apps on mobile phone or computer <sup>a</sup>	31.1	34.4	32.8
3. Psychoeducational materials available online <sup>a</sup>	27.2	30.6	28.9
4. Wellness, stress management, and burnout prevention lectures <sup>a</sup>	31.1	31.1	31.1
5. Onsite wellness programming activities (e.g., yoga, mindfulness) <sup>b</sup>	49.4	51.7	50.6
6. Onsite relaxation groups (e.g., emotion management, coping with stress) <sup>b</sup>	48.3	45.0	46.7
7. Onsite in-person counseling <sup>b</sup>	39.4	42.8	41.1
8. Online counseling provided via text or applications such as WeChat <sup>b</sup>	40.6	41.1	40.8
9. Peer support outreach <sup>b</sup>	54.4	51.7	53.1

Note. WPPQ = Wellness Programming Preferences Questionnaire.

<sup>a</sup> Program that is educational and less interactive. <sup>b</sup> Program that is interactive and interpersonal.

### Wellness Programming Preferences Differences Between Pandemic Stages

We addressed this research question by investigating the consistency of wellness programming preferences between two different phases of COVID-19 (early/acute phase: from December 2019 to April 2020; late/chronic phase: from May 2020 to March 2022). The intraclass correlation of the WPPQ for these two phases was .81, which is considered good (Portney, 2020), indicating that contrary to what was hypothesized, HCPs' preferences for wellness programs remained quite consistent between the phases. Therefore, we aggregated the responses about program preferences between these phases for the subsequent analysis.

### Factors Influencing Wellness Programming Preferences

Using K-Medoids clustering analysis combined with both the silhouette and the gap statistic methods, we identified two optimal clusters based on participant response patterns on the WPPQ. Therefore, we proceeded with two clusters for the subsequent study analysis related to factors influencing wellness programming preferences. The first cluster, labeled as “high preference group,” included 75 participants who consistently answered “1” (*very much prefer*) for all WPPQ items. The second cluster, labeled the “low preference group,” included the remaining 105 participants who answered “2” or “3” (*somewhat prefer or not prefer at all*) for all WPPQ items. We combined responses 2 and 3 into a single category since very few participants endorsed “3.”

Using K-Medoids clustering analysis, we compared the factors influencing wellness programming preferences between the high preference and the low preference groups. We employed Welch's *t* test for continuous variables (age, PHQ-9, DASS-21, ATSPPH-SF, SCSQ-Pos, SCSQ-Neg) and Fisher's exact test for categorical variables (i.e., gender, highest education, health care profession, direct experience in working with COVID-19-patients, work setting, and site). The results showed that only ATSPPH-SF,  $t(145) = 3.28, p = .001$ , and SCSQ-Pos,  $t(154) = 2.70, p = .008$ , were significant, meaning that the high preference group showed a higher level of help-seeking attitudes and positive coping styles compared to the low preference group. There were no statistically significant group differences for the other variables (Table 4).

### Discussion

During the COVID-19 pandemic, various wellness interventions and programs were developed and provided to HCPs in China, yet

the extent to which such interventions and programs were preferred by HCPs and factors associated with such preferences was unknown. The present study represents the first attempt to address this gap by examining wellness program preferences among Chinese HCPs. Based on a survey of HCPs from two provinces in China, we found a strong preference for interactive and interpersonal wellness programs as compared to educational and less interactive programs among Chinese HCPs. Such preferences appeared to be true throughout the pandemic. HCPs with proactive help-seeking attitudes and positive coping styles showed the strongest preference for all wellness programs. These findings can guide future wellness program development, implementation, and evaluation for HCPs in China.

In keeping with our hypothesis, interactive and interpersonal wellness activities, such as peer support outreach, various onsite in-person programs, and onsite in-person counseling, were favored by HCPs. These preferences are consistent with empirical results from other countries showing that sessions led by colleagues are effective in promoting personal wellness and enhancing emotion regulation

**Table 4***Group Differences Between High Preference Group Versus Low Preference Group*

Variable	df	t	p
Age	143	1.35	.18
Gender			.46
Highest education			.27
Health care profession			.72
Direct experience in working with COVID-19 patients			.13
Work setting			.88
Site			.88
PHQ-9	163	-1.37	.17
DASS-21	159	-1.04	.30
ATSPPH-SF	145	3.28	.001**
SCSQ-Pos	154	2.70	.008**
SCSQ-Neg	150	-0.08	.94

Note. *p* values were calculated using either Welch's *t* test (for continuous variables) or Fisher's exact test (for categorical variables); *df* and *t* are presented only for Welch's *t* test. PHQ-9 = Patient Health Questionnaire-9; DASS-21 = Depression and Anxiety Stress Scale; ATSPPH-SF = Attitude Toward Seeking Professional Psychological Help-Short Form; SCSQ-Pos = Simplified Coping Style Questionnaire-Positive Coping; SCSQ-Neg = Simplified Coping Style Questionnaire-Negative Coping.

\*\*  $p < .01$ .

through mutual learning and sharing with others (Feinstein et al., 2020). Additionally, our findings align with previous research highlighting that connecting with colleagues enhanced HCP's feelings of camaraderie and community, bolstered their resilience, fostered their sense of meaning in their work, and reduced their sense of isolation (Ma et al., 2021; Mellins et al., 2020). Despite some empirical evidence of the benefit and relevance of psychoeducational and less interactive wellness programs, such as psycho-educational videos and mHealth apps (Robles et al., 2020; Yoon et al., 2021), and how common it was across health systems to offer psychoeducational resources (Mellins et al., 2020), such programming was less preferred by the HCPs in the current sample. Specifically, less than one-third of the Chinese HCPs in this sample expressed interest in wellness and stress management apps, wellness lectures, or psychoeducational materials. It is worth noting that when frontline HCPs were queried about the usefulness of mHealth apps, the features they found to most promote their well-being were interactive in nature, such as a built-in chat function with a counselor and an in-app peer support community (Yoon et al., 2021). This further highlights the importance of incorporating interactive and interpersonal elements into any wellness program.

Interestingly, contrary to what was expected given evidence that HCPs had different emotional reactions at various stages of the pandemic (Eftekhar Ardebili et al., 2021), our results revealed no differences in preferences for wellness programs at the various stages of the pandemic; interactive and interpersonal activities were preferred regardless of the stage of the pandemic. This may be explained by empirical findings that Chinese HCPs identified having social support networks and relationships (both personal and professional) as the most helpful coping strategies (Z. Cai et al., 2020; H. Chen et al., 2020). In a related vein, strong social support emerged as one of the most salient predictors of positive mental health outcomes for studies on the psychological well-being of front-line HCPs, including those in China (Hou et al., 2020; Labrague & De los Santos, 2020).

In terms of factors that predicted wellness program preferences, as hypothesized, the current investigation revealed that HCPs with a higher level of help-seeking attitudes endorsed more interest in a range of wellness programs. This finding is in keeping with evidence that positive attitudes about help-seeking are significantly associated with future help-seeking and treatment use regardless of the presence of psychological symptoms (Mojtabai et al., 2016). The findings also indicated that among Chinese HCPs, more positive coping styles were associated with more interest in a range of wellness programs. Although not predicted, this result is consistent with data revealing that individuals with more positive life coping strategies are more capable of obtaining well-being (Zheng et al., 2016). Contrary to what was hypothesized, psychological distress did not play a role in individuals' preferences in wellness programming. While this finding was unexpected, it is understandable in light of the evidence that many individuals with high levels of psychological distress as well as symptoms of anxiety and depression are reluctant to seek help (Gulliver et al., 2012). Future research should investigate ways to increase accessibility and adoption of wellness programming among Chinese HCPs who have less positive help-seeking attitudes and coping styles and those with higher psychological distress, as these individuals may be particularly vulnerable during public health crises and in need of wellness programming.

Despite its contributions to understanding wellness programming preferences among HCPs in China, our study has several limitations. To contextualize this investigation, we primarily reviewed pertinent

literature published in English. Thus, potentially relevant literature in Chinese was not included either in laying the groundwork for this study or in providing a framework for understanding the findings. The incorporation of literature in Chinese could increase the cultural relevance of the work. However, most of the authors of this article reside in China or are from China and assert that the most significant publications on this topic appear in English. In terms of the sample, the relatively small sample size limits the generalizability of the findings to HCPs who do not work at public hospitals in major cities in China. The study design used voluntary sampling, which is vulnerable to bias and sample representativeness. Moreover, the applicability of the findings to Chinese HCPs outside of the context of a global pandemic as well as to samples of HCPs outside of China remain empirical questions that deserve further investigation. Several limitations of the study methods also are worth noting. As only self-report instruments were utilized, recall bias is a consideration. Further, several measures included in the study were developed within the context of Euro-American cultures and only had cutoff scores from Western samples. In addition, there were two other measures that were administered to the sample, the Impact of Event Scale-Revised and the Connor Davidson Resilience Scale, but were not included in this report as they were not germane to the study questions. It is unknown if completing these additional measures impacted the current results, but there is no compelling reason why that would have been the case. Finally, there are many variables that may impact HCPs' wellness program preferences as well as their utilization of available programs that were not examined. Future research in this area should consider a broader array of potential programs (e.g., yoga, mindfulness training), information about the specific programs (e.g., frequency, duration, time(s) of day offered, location, leader), and organizational factors (e.g., protected time to access wellness programs, incentivization for program participation, advertisement of programs) that influence both program preferences and utilization.

Despite these limitations, the present study offers valuable insights for developing wellness programming for HCPs in China. Specifically, it is evident that such programming should be primarily interactive and interpersonal. Evidence shows that peer-to-peer support significantly improves HCPs' well-being, suggesting that such interventions should be incorporated into HCP training and offered as ongoing support, regardless of whether there is a public health crisis (Meredith et al., 2024). Embedding peer-to-peer interventions in well-being centers within hospital systems is crucial, as these centers are associated with greater well-being and more job satisfaction, irrespective of job stress levels (Blake et al., 2024). The fact that multiple interactive and interpersonal wellness activities were of interest to HCPs, including peer support, wellness activities, relaxation programming, and counseling, underscores the need for multifaceted wellness programs to appeal to different HCPs and to meet HCPs' multiple wellness needs (Kaslow et al., 2020). However, given that between one-quarter and one-third of HCPs endorsed a high preference for specific types of programs that we categorized as educational and less interactive, a comprehensive approach also should include crisis hotlines or textlines, easy access to wellness and stress management apps, and pertinent lectures and online materials. A multipronged approach is further supported by data that a range of evidence-based interventions can reduce stress, anxiety, depression, and burnout in HCPs (Anger et al., 2024). To maximize the effectiveness, these multifaceted wellness programs should be culturally responsive, incorporating culturally specific wellness activities recommended by participants in this investigation,

such as watching cherry blossoms by the East Lake and practicing Chinese calligraphy. It also must entail integrating cultural norms and values (Ma et al., 2021). To promote the use of such wellness programs, mental health literacy interventions may need to be employed to encourage positive help-seeking behaviors in HCPs in general, not just those in distress (Gulliver et al., 2012). Finally, wellness initiatives must extend beyond individual HCPs to include organizational and psychosocial work environment interventions, which have proven to be effective in protecting and bolstering the well-being of HCPs during pandemics and normal times (Catapano et al., 2023; Nicolakakis et al., 2022; Sinsky et al., 2020).

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