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ORIGINAL RESEARCH

Inspired in Adversity: How Inspiration Mediates the Effects of Emotions on Coping Strategies

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Purpose: Inspiration is a psychological construct that has been relatively understudied in times of difficulty. This study aims to investigate the mediating effect of inspiration on the relationship between emotions and coping strategies in the context of adversity and to testify the effect in Chinese as well as the International societies.

Participants and Methods: Using the snowball sampling method, two survey studies were conducted among 523 Chinese and 503 international participants during and soon after the local Covid-19 outbreak to testify how positive and negative emotions contributed to various coping strategies and whether the experience of inspiration mediated these relations. Structural equation modeling (SEM) was used to analyze the data.

Results: Positive emotions had a higher impact on problem-solving and seeking social support coping strategies, whereas negative emotions had a higher impact on avoidance coping strategy. Both positive and negative emotions had positive relationships with inspiration, but positive emotions had a higher impact than negative ones. The indirect effects of emotions on problem-solving and social support coping strategies through inspiration were significantly positive, while the avoidance coping strategy was not influenced by the experience of inspiration.

Conclusion: The results suggest that being inspired in both positive and negative emotions is positively related to approach coping strategies in adverse situations such as COVID-19, with the effect patterns slightly differing between Chinese participants and their Western counterparts. This study highlights the importance of inspiration experience as a motivational state that can help individuals bring newly acquired ideas into fruition, especially during times of difficulty. By understanding the role of inspiration in the context of adversity, public health systems can better assist individuals in different societies to cope with the challenges they face.

Keywords: COVID-19, coping, inspiration, emotions

Introduction

At a time when many parts of the world are suffering from adversities such as pandemic, economic recession, war, and other forms of geopolitical upheaval, emotions and coping strategies are two extensively investigated topics to access and assist the public health systems in different societies. For instance, since the COVID-19 pandemic first broke out in China in the spring of 2020 and then swept the world, considerable research attention has been given to how the uncertainty, the strict policies, and mandatory reinforcement triggered various emotions,[1–3] and how individuals coped with the challenges brought by this global health crisis.[4–6]

Yet another psychological construct has not received as much attention particularly at times of difficulty – inspiration, known as an approaching motivational state that compels an individual to bring the newly acquired ideas into fruition, as it may play an important role to bring people out of the mud by acquiring new ideas and transforming them into certain level of positivity. Currently, little has been discussed about the role inspiration plays at difficult times, particularly, how inspiration is experienced by individuals in different emotions and how it predicts their coping strategies. This research aims to investigate the mediating effect of inspiration on the relationship between emotions and coping strategies in the

context of adversity, and whether such effect in China – notably a collective society, as well as the Western countries with high individualism.

After the COVID-19 outbreak, numerous empirical studies have investigated how people coped with the event. It has been found that certain types of coping strategies are more beneficial to both physical and psychological well-being. For instance, Awoke discovered that approach coping was associated with more helpful responses to adversity, including adaptive practical adjustment, better physical health outcomes, and more stable emotional responses, while avoidance coping was associated with poorer physical health among those with medical conditions.[5] Such findings are typically helpful for health institutions and authorities to develop intervention and policies for the sake of mental well-being.

In this regard, coping, defined as

constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person, (P141)[7]

can be categorized in various ways, one common distinction is the approach versus avoidance coping, which describes an individual's orientation towards or away from threatening stimuli.[8] Specifically, the Coping Strategy Indicator (CSI) measures people's responses to a specific stressful event using three concise coping strategies: problem-solving, seeking social support, and avoidance.[9] Problem-solving and seeking social support are considered approach coping, while avoidance reflects a tendency to avoid problems physically or psychologically.[10] Approach coping strategies are generally believed to enhance positive experiences and increase subjective well-being, while avoidance coping strategies are considered harmful from the perspective of physical well-being, although avoidance may be beneficial in reducing short-term stress.[6,8]

Meanwhile, as the relationship between emotions and coping has long been recognized as significant, it has also been investigated by COVID-19 literatures. However, the findings have pointed to multiple directions of causality.[1,6,11] Such feedback loops make it possible for a reciprocal causal relationship between emotions and coping responses. However, as suggested by Lazarus, in this study, emotions are considered as immediate responses to a stressful event that influences behavior.[12]

As previously mentioned, a bunch of negative emotions, such as anxiety, fear, sadness, anger, and anxiety,[1–3] have been reported during the Covid-19 outbreak, in the meantime, positive emotions such as happiness, hope, joy, and altruism have also been observed.[2,13–15] Just as Folkman and Lazarus pointed out, people facing stressful events experience multiple and often conflicting emotions. The coexistence of positive and negative emotions during Covid-19 highlights the need to consider the impact of both types of emotions on how people cope with the event.

Alkan demonstrated that positive emotions predict approach coping strategies such as problem-solving and seeking social support while negative emotions predict avoidance strategies.[16] This has been verified by the COVID-19 literatures in which positive emotions have been shown to promote problem-solving, creativity, and thinking flexibility,[17,18] while negative emotions can enhance people's responsiveness and problem-solving abilities.[19] Based on these findings, we propose the following hypothesis:

H1: Positive emotions are positively correlated with the two approach coping strategies, problem-solving (H1a), and seeking social support (H1b), while negative emotions are positively correlated with avoidance coping strategies (H1c).

Meanwhile, research in positive psychology suggests that when facing difficult circumstances, some individuals in negative emotions can also be motivated to take action that helps them to change their situation.[20] Something must happen in between emotions and coping. We suggest that inspiration acts as a mediator for the following reasons. Firstly, inspiration is a motivational state, as defined by Thrash and Elliot.[21] It is a psychological state triggered by a stimulating object that compels individuals to bring their ideas to fruition.[22] The transmission model of inspiration suggests that inspired individuals are motivated to transmit their newly acquired ideas (ie, as a role model) towards a motivational object (ie, a better self).[23,24] This process predicts positive psychological consequences, such as higher self-esteem, creativity, approach motivation, leadership, all of which are positively correlated with approach coping strategies,

problem-solving, and seeking social support.[11,23,25] Secondly, as Elliot and Thrash have long found that both positive and negative emotions can predict performance approach goals,[23] we propose Hypothesis 2:

H2: Inspiration mediates the link between emotions and two approach coping strategies - problem-solving (H2a) and seeking social support (H2b). Although the experience of inspiration can also be found among individuals with negative emotions, its approach tendency runs counter to avoidance; therefore, we propose that inspiration does not mediate the link between emotions and avoidance coping strategies (H2c).

Through a review of the literature on coping, positive psychology, and inspiration, we propose our explanatory model. Besides, recent studies found that the cultural orientations of individualism/collectivism would affect people's coping behaviors during COVID-19 pandemic.[26,27] Collectivism perceives individuals as inherently integrated within the group, whereas individualism places a greater emphasis on an individual's autonomy and independence.[28] Shekriladze et al found that individualism negatively predicts the passive-submissive style and positively predicts the action-planning style, while collectivism positively predicts action-planning, information accessing/processing, passive-submissive and avoidance styles.[26] As China is a typical collectivistic society and western countries are more individualistic,[28] this study further collects data from the Western countries, to compare the influential paths of emotion, inspiration and coping strategies between collectivist and individualist cultures.

Materials and Methods
Participants and Procedure
The survey for Study A was conducted from February 21 to March 3, 2020, during the lockdown period of Wuhan, China. By the time most universities evacuated their students. We used the snowball sampling method, starting with inviting volunteer faculty members from 11 universities in 11 provinces to forward the invitation link to their students via WeChat groups. The first set of invitees then forwarded the invitations to their contacts whom they considered concerned about the Covid-19 issue and would like to participate. Participants provided anonymous basic information online, demographic information, and their involvement with the Covid-19 pandemic, and then completed the questionnaires via the SoJump online survey APP. A total of 514 (368 females and 146 males) Chinese participants from 28 provinces of the country were investigated, ranging in age from 18 to 50 (M = 21.30, SD = 4.84).

Several months later, when Covid-19 had spread globally, we conducted Study B to testify our model in different cultural contexts, especially the international participants from mostly the Western countries with higher individualistic scores to compare with China. Participants were recruited using a non-probability sampling technique that combined purposive and snowball sampling. The questionnaire was distributed online through WhatsApp groups, SurveyCircle, and SurveySwap to expand the reach worldwide. A total of 487 (308 females, 176 males, 2 non-binary or third gender, and 1 prefer not to say) international participants from 37 countries, ranging in age from 18 to 61 (M = 25.20, SD = 5.90), were investigated. In order to compare with the Chinese participants in Study A, the second questionnaire deliberately excluded Chinese residents. Participants were mostly from the Western countries, and anonymity was respected.

Measures
Each participant completed a questionnaire consisting of four sections: (1) Coping Strategy Indicator (CSI), (2) Inspiration Scale, (3) revised version of Positive and Negative Affect Schedule (PANAS), and (4) demographics. Constructs, factor loading, α, CR and AVE of measures are listed in Tables 1 and 2.

Coping Strategies
The Coping Strategy Indicator (CSI) was used to measure coping responses to a specific stressful event on a 5-point scale, with a higher score indicating a higher frequency of using a particular coping strategy.[9] We selected the CSI to measure coping strategies as it allows us to capture the threatening situation ad hoc by asking individuals to recall the critical issues related to Covid-19 that caused them to worry. Participants indicated the extent to which they used 33 coping strategies while dealing with the problem. The CSI scale includes three subscales of 11 items each: problem-solving, seeking social support, and

Table 1 Constructs, α, CR and AVE of Study A

Construct	α	Composite Reliability	AVE
Inspiration	0.933	0.932	0.638
Problem Solving	0.905	0.912	0.469
Social Support	0.893	0.858	0.423
Avoidance	0.719	0.656	0.180
Positive Emotion	0.828	0.763	0.435
Negative Emotion	0.844	0.716	0.373

Table 2 Constructs, α, CR and AVE of Study B

Construct	α	Composite Reliability	AVE
Inspiration	0.953	0.969	0.732
Problem Solving	0.901	0.906	0.461
Social Support	0.908	0.876	0.460
Avoidance	0.825	0.809	0.310
Positive Emotion	0.835	0.804	0.455
Negative Emotion	0.866	0.810	0.448

avoidance. The internal consistency of coping was good, with Cronbach's alpha coefficients of 0.89, 0.72, and 0.83 for the subscales of problem-solving, seeking social support, and avoidance, respectively, in Study A; and 0.90, 0.91, and 0.82, respectively, in Study B.

Inspiration Experience

The Inspiration Scale was used to measure the frequency and intensity of experiencing inspiration, with four statements, each followed by two questions.[29] The questions asked how often and how deeply/strongly the participants experienced what was described as an inspirational experience in the statement. Frequency items were rated from 1 (never) to 5 (always), and intensity items were rated from 1 (not at all) to 5 (extremely). The internal consistency was good, with Cronbach's alpha coefficients of 0.93 in Study A and 0.95 in Study B.

Emotions

Emotions were assessed using a revised short form of the Positive and Negative Affect Schedule (PANAS).[30] Positive emotions included pleasant feelings, happiness, excitement, gratitude, pride, and love, while negative emotions included unpleasant feelings, sadness, anger, shame, guilt, envy, and worry. All these items were rated on a 7-point scale and averaged to calculate scores for positive and negative emotions. Additionally, anxiety and pressure items were included to assess situational responses to the stressful event. The revised PANAS scale showed good internal consistency, with Cronbach's alpha coefficients of 0.83 and 0.84 for positive and negative emotions, respectively, in Study A, and 0.84 and 0.87, respectively, in Study B.

Data Analysis

Statistical analysis was conducted using R4.3.1 software. The normal distribution of all variables was examined using the Kolmogorov–Smirnov test, and all continuous variables were found to follow a normal distribution. Structural equation modeling (SEM) was utilized to investigate the relationships between latent variables of emotions (positive and negative), inspiration, and coping strategies (problem-solving, seeking social support, and avoidance). Other statistical methods employed included descriptive statistics, correlation analysis, regression analysis, and bootstrap analysis. The significance level for all variables was set at $\alpha = 0.05$.

Results

Descriptive Statistics and Correlation Analyses

The demographical information of Study A and B is shown in Table 3. The two studies have the comparable patterns on gender and involvement level, the later measured how closely the participant is related to the people infected by the Covid-19. Compared with the all-Chinese participants in Study A, the sample of Study B contains Western participants with more diversified cultural backgrounds – including Netherlands, USA, UK, Germany, and Belgium and some other European countries. During the survey, 378 respondents in Study B resided in their country of origin, while 125 were engaged in travel, work, or studies abroad (see Table 4). The differences between Study A and Study B lie in that: Firstly,

Table 3 Demographic

	Study A		Study B	
	N	**Percentage**	**N**	**Percentage**
Gender				
Male	146	28.40%	176	36.14%
Female	368	71.60%	308	63.24%
Non-binary/third gender			2	0.41%
Prefer not to say			1	0.21%
Involvement				
Personally	130	25.29%	60	12.32%
Immediate family	91	17.70%	208	42.71%
Relative or friends	22	4.28%	319	65.50%

Table 4 Countries Where All Participants in Study B Come from

Country	Count	Percentage	Country	Count	Percentage
Netherlands	133	27.31%	Austria	4	0.82%
USA	65	13.35%	Romania	4	0.82%
UK	54	11.09%	Luxembourg	4	0.82%
Germany	41	8.42%	Bulgaria	3	0.62%
Canada	20	4.11%	Denmark	3	0.62%
Belgium	17	3.49%	Hungary	3	0.62%
France	17	3.49%	Switzerland	3	0.62%
India	17	3.49%	Armenia	2	0.41%
Ireland	12	2.46%	Colombia	2	0.41%
Italy	9	1.85%	Czech Republic	2	0.41%
Portugal	8	1.64%	Croatia	2	0.41%
Slovakia	6	1.23%	Finland	2	0.41%
Spain	6	1.23%	Latvia	2	0.41%
Singapore	6	1.23%	Morocco	2	0.41%
Australia	5	1.03%	Norway	2	0.41%
Brazil	5	1.03%	Sweden	2	0.41%
Greece	5	1.03%	Lithuania	1	0.21%
Poland	5	1.03%	Malta	1	0.21%
Russia	5	1.03%	Tunisia	1	0.21%
Israel	5	1.03%	Turkey	1	0.21%

the respondents' cultural backgrounds were different. Secondly, Study A primarily recruited university students, whereas Study B encompassed a more diverse range of individuals, resulting in a higher mean age. Lastly, the level of involvement with COVID-19 varied between the two studies. Although all participants were highly involved in COVID-19, Study A participants exhibited lower degrees of involvement than those in Study B due to the low infection rate in Wuhan and other regions of China during the early and aftermath stages. In contrast, although most Study B participants did not experience personal involvement with COVID-19, but their immediate family members, relatives, or friends were impacted, leading to significantly higher levels of pressure and anxiety.

Tables 1 and 2 present the constructs, items, factor loading, α (Cronbach's alpha), Composite Reliability (CR), and Average Variance Extracted (AVE) values for Study A and B. It is evident that the AVE values for some constructs are relatively low compared to others. For instance, the AVE values for "Problem Solving" and "Avoidance" are 0.469 and 0.180, respectively. However, the CR values for all constructs meet the acceptable threshold and therefore can still be relied upon to indicate the reliability and internal consistency of the construct, as suggested by Fornell and Larcker (1981).

Correlation analysis (results shown in Table 5) was adopted to examine the associations among the demographics, pressure, anxiety, three coping strategies, and positive and negative emotions as the cultural differences were considered essential in this research. Indeed, several differences between the two studies were revealed, but most correlation relationships were consistent. These differences may result from cultural differences, as well as the different degrees of involvement in COVID-19.

Path weights of Study A are displayed in Figure 1. The model fitted the data well. Although the chi-square was significant, fit indices demonstrated a good fit: $\chi^2 = 2590.950$, $p < 0.000$, df = 1267; RMSEA = 0.045, SRMR = 0.059; CFI = 0.910, TLI = 0.898. Except for the path from inspiration to avoidance, all the individual paths were significant and positive. The indirect effects of positive and negative emotions on problem solving and social support were significant and positive, and the indirect effects of positive and negative emotions on avoidance were not significant.

Path weights of Study B are displayed in Figure 2. The model fitted the data well. The chi-square was significant, and fit indices also demonstrated a good fit: $\chi^2 = 2153.391$, $p < 0.000$, df = 1273; RMSEA = 0.037, SRMR = 0.060; CFI = 0.939, TLI = 0.932. Most of the paths were significant and positive, while the path from inspiration to avoidance was marginally significant and negative, and the paths from positive emotion to avoidance, from negative emotion to problem

Table 5 Means, Standard Deviations (SD), and Correlations for the Research Variables

		M	SD	I	2	3	4	5	6	7	8	9	10
Study A	I.Gender	–	–										
	2.Age	21.30	4.84	−0.09~	I								
	3.Pressure	4.04	1.38	0.01	0.13**	I							
	4.Anxiety	3.77	1.58	0.04	0.07	0.7***	I						
	5.Inspiration	2.98	0.78	0.01	0.02	0.04	0.04	I					
	6.Problem Solving	3.38	0.59	0.06	0.11**	0.19***	0.11**	0.42***	I				
	7.Social Support	3.10	0.65	0.10*	0.05	0.24***	0.22***	0.25***	0.57***	I			
	8.Avoidance	3.07	0.51	0.03	−0.01	0.27***	0.35***	0.11*	0.29***	0.43***	I		
	9.Positive Emotions	4.06	0.98	0.03	0.01	−0.09*	−0.11*	0.26***	0.32***	0.27***	0.12***	I	
	10.Negative Emotions	3.21	1.01	0.00	0.04	0.58***	0.63***	0.17***	0.13***	0.31***	0.39***	0.06	I

(Continued)

Table 5 (Continued).

		M	**SD**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Study B	1.Gender	–	–										
	2.Age	25.20	5.90	−0.15***	1								
	3.Pressure	5.06	1.56	0.05	−0.07	1							
	4.Anxiety	4.66	1.90	0.03	−0.09*	0.64***	1						
	5.Inspiration	3.13	0.93	−0.04	−0.01	0.06	0.05	1					
	6.Problem Solving	3.40	0.74	−0.02	−0.03	0.09*	0.05	0.54***	1				
	7.Social Support	3.11	0.81	0.15***	−0.1*	0.05	0.09*	0.24***	0.42***	1			
	8.Avoidance	3.06	0.76	0.10*	−0.19***	0.09*	0.15***	−0.11*	0.06	0.23***	1		
	9.Positive Emotions	4.17	1.06	−0.04	−0.01	−0.02	−0.09~	0.51***	0.43***	0.26***	−0.11*	1	
	10.Negative Emotions	3.43	1.15	−0.08~	−0.05	0.56***	0.63***	0.04	0.02	0.04	0.26***	−0.10*	1

Notes: Gender: 1 = male, 2 = female, 3 = non-binary/third gender, 4 = prefer not to say. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; ~ $p < 0.1$.

solving and seeking social support were not significant. Meanwhile, the indirect effects of positive and negative emotions on problem solving and social support were significant and positive, and the indirect effects of positive and negative emotions on avoidance were marginally significant and negative.
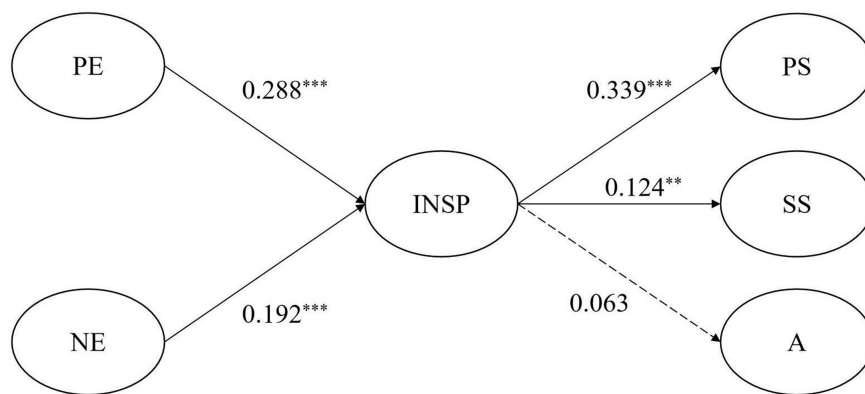
Direct Effect	
PE→PS	0.295***
PE→SS	0.314***
PE→A	0.147**
NE→PS	0.314**
NE→SS	0.356***
NE→A	0.494***
Indirect Effect	
PE→INSP→PS	0.098***
PE→INSP→SS	0.036*
PE→INSP→A	0.018
NE→INSP→PS	0.065**
NE→INSP→SS	0.024*
NE→INSP→A	0.012

Figure 1 The hypothesized research model and the summary of standardized path coefficients for the modified model of Study A.
Notes: All the one-way arrows represent the hypothesized research model. Solid lines represent significant coefficients, and dotted lines represent non-significant coefficients. ***$p < 0.001$; **$p < 0.01$; *$p < 0.05$. χ^2 = 2636.348, $p < 0.000$, df = 1248; RMSEA = 0.045, SRMR = 0.060; CFI = 0.903, TLI = 0.892.
Abbreviations: PE, positive emotions; NE, negative emotions; PS, problem solving; SS, seeking social support; A, avoidance; INSP, inspiration.
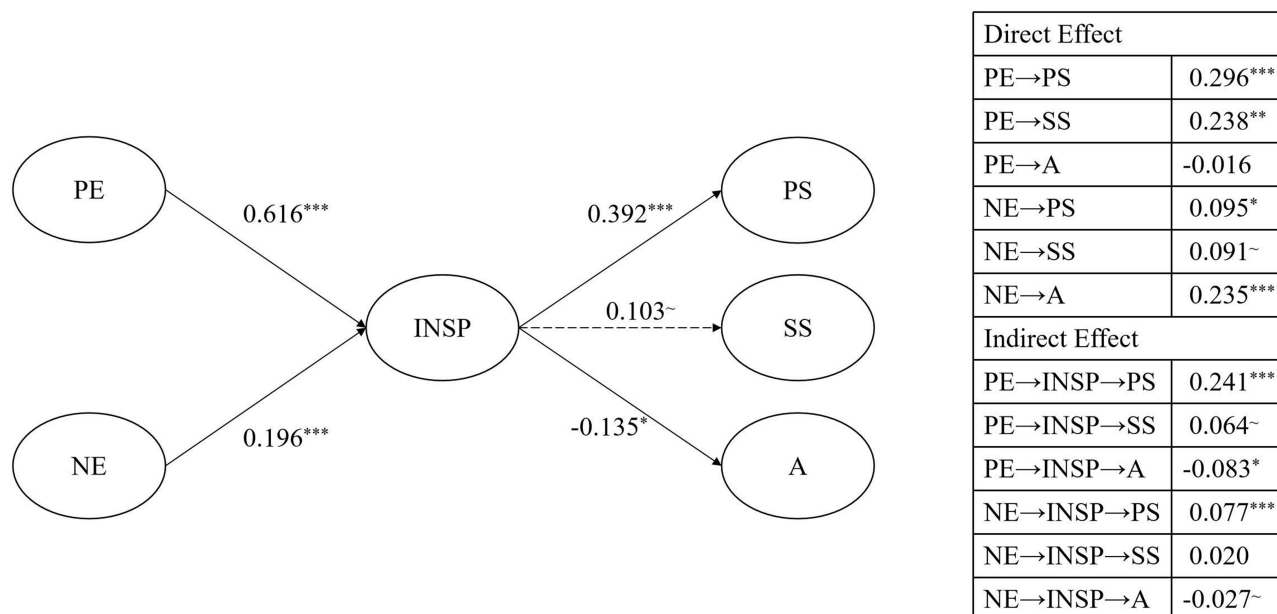
Direct Effect	
PE→PS	0.296***
PE→SS	0.238**
PE→A	-0.016
NE→PS	0.095*
NE→SS	0.091~
NE→A	0.235***
Indirect Effect	
PE→INSP→PS	0.241***
PE→INSP→SS	0.064~
PE→INSP→A	-0.083*
NE→INSP→PS	0.077***
NE→INSP→SS	0.020
NE→INSP→A	-0.027~

Figure 2 The hypothesized research model and the summary of standardized path coefficients for the modified model of Study B.
Notes: All the one-way arrows represent the hypothesized research model. Solid lines represent significant coefficients, and dotted lines represent non-significant coefficients. ***$p < 0.001$; **$p < 0.01$; *$p < 0.05$; ~$p < 0.1$. χ^2 = 2490.364, $p < 0.000$, df = 1284; RMSEA = 0.044, SRMR = 0.062; CFI = 0.915, TLI = 0.906.
Abbreviations: PE, positive emotions; NE, negative emotions; PS, problem solving; SS, seeking social support; A, avoidance; INSP, inspiration.

Discussion

The findings of this study shed light on the interrelationship between emotions, inspiration, and coping strategies in the context of the COVID-19 pandemic. The study provides valuable insights into how people respond psychologically to public health emergencies, which is crucial for their own well-being and the stability of society as a whole. By investigating the mediating effect of inspiration on the relationship between emotions and coping strategies, the study helps to explain how positive and negative emotions lead to different coping strategies. Specifically, the study supports previous research findings that positive emotions are associated with approach coping strategies such as problem-solving and seeking social support, while negative emotions are associated with avoidance coping strategies.

Data shows that emotions have varied significant relationships with different coping strategies in different culture. In Study A, both positive emotions and negative emotions were positively related to all three coping strategies. The direct relationship between positive emotions and problem solving is strongest, while negative emotions have the strongest relationship with avoidance. Inspiration is only positively related to problem solving and seeking social support. In Study B, positive emotions and inspiration have significant positive relationships with problem solving and seeking social support, while negative emotion has only direct significance related to avoidance. The results provide initial evidence for the relationship between emotion and coping strategy: positive emotions will promote people to adopt problem solving thinking and actively seeking for social support, while negative emotions will lead to avoidance. Besides, positive emotions have higher correlation coefficient with inspiration than negative emotion, suggesting that inspiration plays an important role in guiding individuals towards more adaptive coping strategies. The findings expand the transmission function of inspiration from creative products to problem solving and relationship support.

Notably, inspiration has stronger relationship with problem solving than seeking social support in both countries. Different coping strategies would lead to different behavioral outcomes regarding COVID-19: problem solving strategy probably contribute to positive attitude and more active preventive behavior and less stress; seeking social support would help to preserve people's psychological well-being; whereas, avoidance strategy would lead to dysfunctional stress, health information avoidance, disregard for protection measures, and anti-vaccination attitudes.[8] Our findings reveal the crucial role of inspiration in enhancing individual's problem-center solving thinking and maintaining mental health through seeking social support. As inspiration can be both a trait and a state, from the trait perspective of inspiration, the

results of this study suggest that when facing threatening situations such as Covid-19, people with high propensity of inspiration (ie more easily inspired in daily life) could more likely engage in problem solving and seeking social support coping strategies with both positive and negative emotions.[29] From the state perspective, the findings suggest that individuals who experienced high inspiration in response to the COVID-19 pandemic may be more likely to engage in adaptive coping strategies, such as problem-solving and seeking social support. This highlights the importance of enhancing inspiration as a means of promoting individuals' ability to cope with public health emergencies.

The study also extends our understanding of intercultural similarities and differences in psychological response during the COVID-19 pandemic. By comparing responses from Chinese and western residents, the study provides empirical evidence for these similarities and differences of their psychological response towards COVID-19. This is important as it highlights the need for culturally sensitive interventions that consider these differences to effectively support individuals and communities during COVID-19. Overall, the findings of this study have important implications for the development of interventions and policies aimed at promoting psychological well-being and resilience in the face of public health emergencies.

Previous literature concentrated more on how different emotions display and value in individualist and collectivist societies. The results further reveal the differentiated relationships among emotion, inspiration, and coping strategies in different culture. Although positive and negative emotions are positively related to inspiration both in China and the Western societies, the correlation coefficient between emotions (both positive and negative) and inspiration is higher among the international participants than the Chinese. The correlation between inspiration and the approaching coping strategies (problem-solving and seeking social support) is also stronger in the West than in China.

On the other hand, the direct correlation between emotion and coping strategies is stronger among Chinese than the international participants. Nevertheless, the emotions seem exert more effect in Chinese participants' coping strategies than their counterparts in the West. Previous studies found people in collectivist society display emotions more implicitly, this finding reveals that emotion might have stronger influence in people's coping strategies. Besides, negative emotions have significant positive relationship with all three coping strategies in China while it only significantly related to avoidance in the West. Lim found the collectivist society valued low arousal emotions more, which including some negative emotions, such as depressed, sad and helpless.[31]

Overall, our findings extend understanding of the psychological mechanisms underlying individuals' coping strategies during public health emergencies, by introducing inspiration as a mediator between emotion and coping strategy. Furthermore, the study's comparison of responses from Chinese and Western participants provides important insights into intercultural differences in the relationships among emotions, inspiration, and coping strategies. These findings underscore the importance of considering cultural factors when developing interventions and policies aimed at promoting effective coping strategies and mental health during public health emergencies.

Practical Implication

By understanding the role of inspiration in mediating the effect of emotions on coping strategies, interventions can be tailored to promote more adaptive coping responses, ultimately contributing to better psychological outcomes for individuals and society.

Firstly, our findings confirm that positive emotions are positively related to effective coping strategy, including problem solving and seeking social support, while negative emotions will lead to avoidance. Public would probably comply with scientific guidance when they take a rational coping strategy. Experts on health, psychology, sociology, and other related field therefore need to consider public's emotional state and its influence on people's subsequent reaction. Although COVID-19 has become normalized nowadays, it still brings menace and challenge to public health owing to its infectivity and renewable variants, especially to the vulnerable group like elder people. Institutions and professions should make effort to enhance public positive emotion and improve negative, which will further contribute to health guidance compliance and social recovery.

The cross-cultural comparison of Chinese and non-Chinese (most Westerners) offers some insight on how both direct effect of emotions and indirect effect of inspiration on coping strategies differ among Chinese citizens and their Western counterparts. Our data demonstrate that Chinese people will also adopt problem-solving and seeking social support

strategies even when they are in negative emotions. Therefore, psychologists should provide methods to move barriers in solving problem and seeking social support for those even in negative emotion, especially by network technology. Weibo, the biggest microblog platform in China, initiated a COVID-19 help topic and provided medical, food and other substantial help for those in isolation.

More interestingly, from the state perspective of inspiration, that is, to consider inspiration as a temperate state that can be triggered by internal or external factors, our study provides a theoretical base for studies on inspiration intervention. Specifically, inspiration is a mechanism by which emotions under public crisis affect coping strategies, deliberately prompting inspiration experience is an effective means for promoting approaching coping strategies, which are known to be related with more subjective wellbeing. Inspiration has much stronger relation with problem-solving and social support in the West, which indicate individualism society should pay more attention to invoke inspiration since it might have greater influence on public's reaction to health emergency or other similar scenarios.

Limitation and Future Studies

This study has several limitations. First, our participants were recruited from online panel in China and another more general international group (Mostly the Western countries); they may have been more adept in using network services than those lacking internet access or advanced technology skills, especially the elder people. The results may not therefore be generalizable to diverse populations in other collectivist and individualist society. Future research is needed to replicate the findings among the general population in more countries. Second, the scope of this study is limited by its cross-sectional design. As causal inferences cannot be drawn, it would be inappropriate to infer that emotion affects inspiration and coping strategy. A longitudinal design or experimental methods are needed to confirm the causal and mediation relationships. Last but not least, future research can further revise the scales and validate the relationships between variables based on the data from this study.

Conclusion

Findings of this study highlight the crucial role of inspiration in enhancing individuals' coping strategies and maintaining mental health during COVID-19 pandemic. The study's findings highlight the significance of positive emotions, as they are associated with approach coping strategies such as problem-solving and seeking social support and have a stronger effect on inspiration than negative emotions. Results also indicate that emotion and inspiration might have more influence on people's adaptive coping strategy during COVID-19 pandemic in the West, which represents the individualist society, than the collectivist society like China. Overall, these findings underscore the importance of promoting positive emotions and inspiration as means of enhancing individuals' coping strategies and mental health during public health emergencies, as well as practical implications for interventions and policies in different cultural contexts.

Data Sharing Statement

All data included in the current study can be obtained from the corresponding author through their email address upon reasonable request.

Ethics Approval and Informed Consent

This study was approved by the Ethics Committee on Human Subjects Ethics Sub-Committee of City University of Hong Kong (H002708) and complied with the Declaration of Helsinki. Verbal informed consent was obtained from each study participant as the data was collected at the early stage of Covid-19 break out, when Wu Han and some other affected areas were lock down, it was impossible to obtain the informed consent in written format. The participants were made aware that their participation was entirely voluntary via the instruction of the online questionnaire. Explanations of our survey purpose and voluntary participation principle were made to the participants before filling out the question-naires. They were also assured that all data collected would remain strictly confidential, and that the survey was solely for research purposes.

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