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The Impact of Gender on Coping Behavior Across Cultures During a Global Health Crisis

Krum Krumov[1]* | **Johann F. Schneider**[2] | **Jin Liu**[3] | **Albena K. Krumova**[4] | **Eko Widodo**[5]

1 Sofia University St. Kliment Ohridski, Bulgaria
2 Saarland University, Saarbrücken, Germany
3 Beijing Institute of Technology, China
4 Sofia University St. Kliment Ohridski, Bulgaria
5 Atma Jaya Catholic University of Indonesia. Jakarta, Indonesia

Corresponding author:
* Krum Krumov – PhD, Dr. Habil., Professor, Sofia University "St. Kliment Ohridski", Bulgaria Email: prof.krumov@gmail.com

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Abstract

In the context of global health crises, the importance of studying the factors that determine population behavioral adaptation strategies is increasing. The aim of the study is to identify gender differences in coping styles and strategies during the COVID-19 pandemic and to assess the role of cultural context in shaping these differences. The methodological basis consists of methods of descriptive statistics and comparative analysis, including t-tests for independent samples. The empirical base of the study includes survey data from 2,617 respondents aged 18 to 70 from six countries (China, India, Indonesia, Bulgaria, Germany, and Hungary), collected using the Brief COPE questionnaire. Findings reveal that gender significantly impacts ($p < 0.05$) all three coping styles. The strongest gender differences were observed in PFC and EFC, with women showing higher preferences, while men exhibited a slight tendency toward AC. Coping strategies further confirmed gender-based distinctions and revealed the combined effects of gender and cultural contexts on coping. Significant effects emerged for specific coping strategies: active coping ($F = 9.35$, $p < 0.01$), positive reframing ($F = 3.99$, $p < 0.05$), emotional support ($F = 21.66$, $p < 0.001$), religion ($F = 9.56$, $p < 0.01$), and self-distraction ($F = 4.13$, $p < 0.05$). These findings highlight that both gender and cultural context play a critical role in shaping coping strategies during a pandemic. These provide insights into the development of culturally sensitive interventions to enhance individuals' psychological resilience in future health crises.

Keywords: Gender, Gender Difference, Gender Behavior, Health, Social Sustainability, Europe, Asia

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1. INTRODUCTION

The COVID-19 pandemic, which emerged in early 2020, has inflicted profound damage on societies worldwide, the most devastating consequence being the loss of human life. The outcomes are evident, and it can be concluded that humanity, as a whole, failed to respond effectively to the life-threatening danger posed by SARS-CoV-2. Ineffective coping applies not only to national governments, international organisations, or medical institutions, but also to individuals, as coping ultimately depends on personal behaviour during an extreme health crisis and the strategies employed to manage life-threatening risks. Selecting appropriate coping strategies influences psychological well-being, since successful coping can protect individuals from the harmful effects of stress (Allen & Leary, 2010).

Some studies on individuals' coping responses to threats and stressors have been conducted during the COVID-19 pandemic (Lischetzke et al., 2022; Simione et al., 2022). The main objective of these studies has been to identify effective coping strategies that could help people prevent or mitigate the negative psychological consequences of future pandemics.

Four decades ago, Lazarus and Folkman (1984) identified two primary types of coping: Problem-Focused Coping (PFC) and Emotion-Focused Coping (EFC). In the former, individuals attempt to gain control over the stressor by eliminating or modifying it, whereas in the latter, they regulate their emotional responses to alleviate distress. In addition to these two coping types, some individuals employ Avoidant Coping (AC), also referred to as disengagement coping, in which they distance themselves from or avoid the stressor to suppress or eliminate associated negative thoughts and feelings (Connor-Smith & Flachsbart, 2007). The choice of coping behaviour type depends on multiple factors - personality traits, available resources, stressor characteristics, and environmental conditions. For example, a study by Dolić and colleagues (2022), conducted during the COVID-19 pandemic, demonstrated that socio-demographic variables, including work experience, age, educational level, and marital status, influence the coping strategies adopted during a health crisis. However, one of the most significant determinants of coping with life-threatening danger is the gender of individuals. Even decades before the COVID-19 outbreak, numerous studies had already revealed gender differences in coping styles and strategies. Based on a meta-analysis, Tamres et al. (2002) concluded that, unlike men, women tend to ruminate more about problems and seek emotional support when facing challenges. Similarly, Matud (2004) found that women score significantly higher than men on emotional and avoidant coping styles. Another study by Meléndez et al. (2012) demonstrated that women more frequently employ emotion-focused coping and seek social support, whereas men tend to rely on problem-focused coping. A substantial body of research thus suggests that men are more inclined toward problem-focused coping, whereas women tend to favour emotion-focused coping (Tamres et al., 2002). Overall, scholars have proposed that men are more likely to use fight-or-flight strategies, while women more often employ coping mechanisms centred on social support seeking. However, the evidence is not entirely consistent, possibly because the studies involve diverse stressors and were conducted at different points in time.

Research conducted during the COVID-19 pandemic has continued to examine the extent to which gender influences coping behaviour (Ulloa et al., 2022; Cohrdes et al., 2023). Much of this research indicates that women score significantly higher than men on emotional and avoidant coping (Hamid et al., 2023). Despite the inconsistencies among studies conducted before and during the pandemic, several important generalisations can be made.

Above all, it should be clarified that most studies carried out in the early months of the pandemic indicate that individuals around the world-regardless of gender-perceived the virus as a serious, life-threatening danger, which had a substantial negative impact on their mental

health due to the anxiety, fear, and worry it provoked (Kira et al., 2023). Nonetheless, there are observable gender differences in the psychological consequences of the pandemic. Multiple studies have shown that COVID-19 had a greater negative effect on women's mental health; compared to men, women experienced higher levels of fear, anxiety, and worry (Kupcova et al., 2023). Based on research conducted at the onset of the pandemic, García-Fernández et al. (2021) concluded that women exhibited greater severity of anxiety, depression, and acute stress symptoms. Other studies similarly reported higher levels of anxiety, depression, and somatisation among women (Laufer & Bitton, 2021).

The present study aims to reveal gender-related differences in coping styles and strategies employed during life-threatening situations in a global health crisis. It further seeks to determine whether cultural background moderates the relationship between gender and coping preferences. In accordance with these objectives, the following hypotheses were formulated:

Hypothesis 1. During a global health crisis, such as the COVID-19 pandemic, gender differences influence coping behaviour, leading to significant variations between males and females in their preferences for coping strategies and the use of Problem-Focused, Emotion-Focused, and Avoidant Coping styles.

Hypothesis 2. During a global health crisis such as the COVID-19 pandemic, diverse cultural contexts mediate coping behaviour differently, resulting in gender-based variations in preferences for coping strategies and for the use of Problem-Focused, Emotion-Focused, and Avoidant Coping styles.

2. LITERATURE REVIEW

Importantly, the negative psychological effects were not solely caused by the virus itself. The restrictive measures implemented during the pandemic, such as mask-wearing, social distancing, and lockdowns, also had a profound impact on mental health. Several studies have shown that these effects varied across socio-demographic groups. For instance, women were generally found to be more vulnerable to stress and more susceptible to mental disorders compared to men (Ulloa et al., 2022; Van de Velde et al., 2023).

These gender differences persisted and even intensified after the initial outbreak (Emerson et al., 2023), suggesting that women experienced greater difficulty coping with restrictions than men. Furthermore, Galasso et al. (2020), in a study examining gender differences in attitudes toward COVID-19 across eight countries, found that women were more likely to perceive the pandemic as a serious health issue and to comply with preventive measures.

Most studies indicate that both the restrictive measures and the anxiety and worry triggered by fear of the virus have negatively affected the mental health and overall well-being of both genders. However, the negative impact has been significantly greater for women than for men (García-Fernández et al., 2021; Kolakowsky-Hayner et al., 2021). Other research further demonstrates that loneliness and social isolation have more adverse psychological effects on women, who tend to exhibit higher levels of depressive symptoms, anxiety, and stress (McQuaid et al., 2020; Laufer & Shechory-Bitton, 2021).

Given these findings, one might expect that women would more frequently resort to alcohol and drug use as a coping mechanism during the pandemic. While some studies do report an increase in alcohol consumption among women (Villanueva-Blasco et al., 2021), the majority indicate that men experienced a greater rise in alcohol and substance use during this period (Thompson et al., 2021; Branquinho et al., 2022). Other findings suggest that women were more prone than men to defensive behaviors during the COVID-19 crisis (Lüdecke & von dem Knesebeck, 2020).

Regarding only one aspect, the authors agree: the transmission of the virus, mortality, and disease severity. Investigations show that

COVID-19 is more common in men than in women and that the death rate is higher in men than in women (Abate et al., 2020; Kharroubi & Diab-El-Harake, 2022). The data also reveal that, compared to women, the symptoms and severity of disease in men are much more severe (Jin et al., 2020; Vahidy et al., 2021). Several explanations have been proposed for these results. One possible reason involves the risky behaviour that is more typical among men, such as higher rates of smoking and alcohol consumption, as well as social and psychological factors, including greater social commitment, mobility, business communication, etc. Of course, the fact that men and women differ in their immunological responses can also be pointed out as a reason. For example, compared to men, women's immune systems respond more effectively to infection (Klein & Flanagan, 2016). Indeed, some studies suggest that the higher mortality rate among men during the COVID-19 pandemic may be attributed to immune factors (Takahashi et al., 2020; Arnold et al., 2022). Furthermore, it is reasonable to assume that the causes for the different mortality rates may be rooted in the coping mechanisms used by men and women in health crisis settings.

Despite the mixed empirical findings, the general conclusion remains that gender differences influence how men and women cope with stressors during the pandemic. Importantly, these variations in coping behaviour are not solely determined by gender but are also shaped by the broader cultural environments in which individuals live. A considerable body of pre-pandemic research indicates that members of different cultures respond to stressors in distinct ways, that cultural contexts mediate coping strategies, and that cultural background serves as a significant predictor of coping style (Akhtar & Kroener-Herwig, 2017).

Cultural factors are deeply intertwined with gender differences. According to Hofstede's cultural dimensions theory (Hofstede, 1991), every national culture can be characterised along six major dimensions: Power Distance Index (PDI), Individualism versus Collectivism (IDV), Masculinity versus Femininity (MAS), Uncertainty Avoidance Index (UAI), Long-Term versus Short-Term Orientation (LTO), and Indulgence versus Restraint (IVR). From this perspective, societies can broadly be classified as either individualistic or collectivistic.

According to the cultural dimension of Femininity/Masculinity (Hofstede, 1998), in cultures dominated by feminine values, there tends to be a relative balance between the social roles of men and women in public life. In contrast, in cultures characterised by high masculinity, gender roles are more strictly differentiated, and self-perceptions between men and women diverge markedly. Men in such societies tend to identify as strong, assertive, stubborn, cool, and achievement-oriented, whereas women are more likely to view themselves as caring, modest, and emotionally expressive. These culturally embedded gender distinctions also manifest in coping strategies under life-threatening conditions. Similar patterns were observed both before (Kim, 2016) and during the COVID-19 pandemic (Vollmann, 2023).

In summary, the preceding analysis suggests that both gender and cultural environment shape how individuals cope with life-threatening crises and determine the effectiveness of these coping mechanisms. However, existing studies conducted before and during the COVID-19 pandemic provide inconsistent evidence, often based on localised or limited samples. Given the lack of definitive conclusions and the scarcity of cross-cultural generalisations concerning the influence of gender and cultural contexts on coping with life-threatening danger during a global health crisis, the present study aims to clarify this issue.

3. METHODOLOGY

The study was conducted in six countries: three from Asia (China, India, and Indonesia) and three from Europe (Bulgaria, Germany, and Hungary). The total sample comprised 2,617 participants aged 18-70 years (M =

37.98, SD = 15.20). It included 1,412 Asian participants (45.9% female, 49.6% male) and 1,205 European participants (64.6% female, 34.5% male). The mean age of Asian participants was 31.50 years (SD = 12.77), and that of European participants was 44.96 years (SD = 14.51).

The Asian subsample included individuals from China (n = 500), India (n = 500), and Indonesia (n = 412). These countries were selected for their large populations and diverse religious systems, encompassing Buddhism, Hinduism, Islam, Taoism, Confucianism, and Catholicism.

The European subsample consisted of participants from Bulgaria (n = 405), Germany (n = 400), and Hungary (n = 400). These countries were chosen as representatives of European Christian civilisation and culture, belonging to predominantly Christian religious systems and characterised by relatively individualistic cultural values.

To assess coping styles and strategies among participants from collectivist (Asian) and individualist (European) cultural backgrounds during a health crisis, the Brief COPE Inventory was employed (Carver et al., 1989; Carver & Connor-Smith, 2010). The Brief COPE is a 28-item self-report measure developed as a short version of the original 60-item COPE scale (Carver et al., 1989). It is designed to evaluate both adaptive and maladaptive coping responses to stressful events.

Participants were asked to indicate, on a four-point Likert scale, how frequently they used each coping behaviour, ranging from "I haven't been doing this at all" to "I've been doing this a lot." Responses were analysed according to three major coping styles: Problem-Focused Coping (PFC), Emotion-Focused Coping (EFC), and Avoidant Coping (AC). Each coping style comprises a set of specific coping strategies: Problem-Focused Coping includes active coping, use of instrumental support, positive reframing, and planning; Emotion-Focused Coping encompasses emotional support, venting, humor, acceptance, religion, and self-blame; Avoidant Coping consists of self-distraction, denial, substance use, and behavioural disengagement.

The Brief COPE has demonstrated sound psychometric properties in prior research. In the present study, internal consistency was satisfactory: Cronbach's $\alpha = 0.85$ for the total scale (n = 28), $\alpha = 0.81$ for PFC (n = 8), $\alpha = 0.73$ for EFC (n = 12), and $\alpha = 0.71$ for AC (n = 8). These results indicate acceptable reliability and internal coherence across all subscales.

Data collection was conducted online across all participating countries using a standardised digital survey platform. The questionnaire was translated from English into Bulgarian, Chinese, German, Hungarian, Indonesian, and Hindi, using a translation–back-translation procedure to ensure linguistic and conceptual equivalence.

For statistical analysis, descriptive statistics, paired-sample t-tests, and independent-sample t-tests were employed. The data analysis focused on differences between cultural and socio-demographic groups; cross-national comparisons were not performed because the samples were not designed to represent individual countries.

4. RESULTS

The results of the present study reveal gender-based preferences for specific coping styles and strategies during a global health crisis. It also addresses whether gender differentiation and cultural background influence these preferences.

According to Hypothesis 1, it was expected that during the COVID-19 pandemic, gender differentiation would significantly influence coping, resulting in differences between men and women in their preferences for Problem-Focused Coping (PFC), Emotion-Focused Coping (EFC), and Avoidance Coping (AC). To examine this, comparative analyses were conducted between male and female participants across the entire sample. As stated by Carver et al. (1989), the three coping styles are further composed of fourteen distinct

coping strategies. Hence, the paper compared gender differences across these strategies. Table 1 shows coping styles by gender (total sample).

Table 1. Coping styles by gender (total sample)

Variable	Gender	N	M	SD	t (df)	p	d
Problem-Focused Coping	Male	1116	2.82	0.59	-4.93 (2540)	.000	0.20
	Female	1426	2.93	0.57			
Emotion-Focused Coping	Male	1116	2.34	0.50	-4.12 (2307)	.000	0.17
	Female	1426	2.42	0.47			
Avoidant Coping	Male	1116	1.97	0.55	1.97 (2180)	.049	0.09
	Female	1426	1.93	0.47			

Note: compiled by the authors

The results presented in Table 1 indicate that gender exerts a statistically significant effect on all three coping styles ($p < .05$). However, for each variable, the effect size was negligible (Cohen's $d \leq 0.20$; Cohen, 1988). A slight tendency emerged for women to prefer both PFC and EFC, whereas men demonstrated a higher inclination toward AC. Despite these differences, the gender effect remained limited. Analysis of mean scores shows that PFC was the dominant coping style for both genders, followed by EFC, and finally by AC.

The results illustrated in Figure 1 reveal male and female preferences for the fourteen coping strategies (facets).

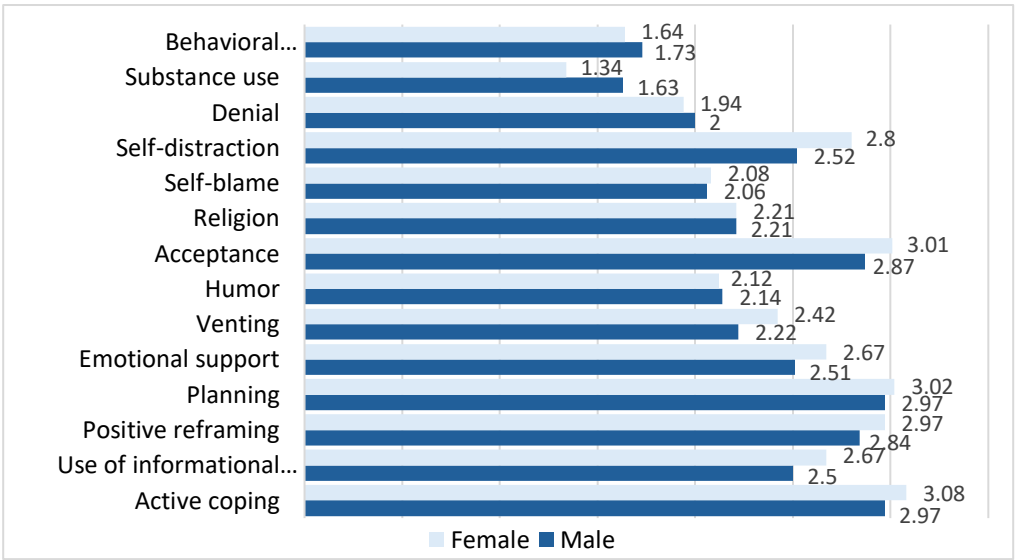

Figure 1. Coping strategies by gender (total sample)

Gender was a significant factor for most strategies, except for Planning, Humour, Religion, Self-blame, and Denial ($p > .05$). Across both genders, the most frequently employed coping strategies were Active coping, Planning, Acceptance, Positive reframing, and Self-distraction. The lowest mean scores were observed for Substance use and Behavioral disengagement. Notably, there are gender differences in the intensity of use of these strategies. Women reported higher mean scores for Active coping, Use of informational support, Positive reframing, Emotional support, Venting, Acceptance, and Self-distraction. In contrast, men scored higher on Substance use and Behavioral disengagement.

Consistent with the coping style analysis, here again, most gender differences in mean

scores were below the typical medium effect size (Cohen's d < 0.50). The only exception was Substance use, where men reported significantly higher scores (M = 1.63, SD = 0.83) compared to women (M = 1.34, SD = 0.65), t(2061) = 9.67, p < .001, yielding an effect size approaching the conventional medium level (d = 0.43) (Cohen, 1988).

According to Hypothesis 2, it was further expected that diverse cultural contexts would moderate the coping process, leading to gender-based differences in coping styles and strategies. To test this, we first analysed gender differences within the European sample to determine whether an individualistic cultural context influences coping preferences.

The results revealed significant gender differences in PFC, with women reporting higher mean scores (M = 2.87, SD = 0.55) than men (M = 2.70, SD = 0.59), t(1191) = –4.82, p < .001, though with a smaller-than-typical effect size (d < 0.50). A similar trend was observed for EFC, where female participants again showed higher scores (M = 2.34, SD = 0.42) compared to males (M = 2.20, SD = 0.43), t(1191) = –5.37, p < .001. In contrast, no significant gender effect was found for AC (M-women = 1.76, SD = 0.41; M-men = 2.34, SD = 0.47), t(748) = 0.05, p > .05, indicating parity between genders in this coping style. The results of European men's and women's preferences for coping strategies are presented in Table 2.

The European data demonstrate that gender differentiation was statistically significant for most coping strategies (p < .05), except for Planning, Self-blame, and Denial (p > .05). Although both men and women employed similar types of coping strategies, significant differences were observed in the intensity of their use. Women reported higher mean scores in Active coping, Use of informational support, Positive reframing, Emotional support, Venting, Acceptance, Religion, and Self-distraction, while men scored higher in Humour, Substance use, and Behavioural disengagement (Table 2).

Table 2. Coping strategies by gender (European sample)

Variable	Gender	N	M	SD	t (df)	p	d
Active coping	Male	415	2.92	0.80	-4.37 (785)	.000	0.33
	Female	778	3.13	0.74			
Use of informational support	Male	415	2.25	0.82	-4.25 (1191)	.000	0.26
	Female	778	2.46	0.84			
Positive reframing	Male	415	2.68	0.74	-4.95 (1191)	.000	0.30
	Female	778	2.91	0.80			
Planning	Male	415	2.97	0.82	-0.17 (1191)	n.s.	n.s.
	Female	778	2.98	0.82			
Emotional support	Male	415	2.40	0.80	-6.55 (1191)	.000	0.40
	Female	778	2.72	0.83			
Venting	Male	415	2.05	0.70	-5.86 (1191)	.000	0.36
	Female	778	2.30	0.71			
Humor	Male	415	2.26	0.92	2.03 (1191)	.042	0.12
	Female	778	2.15	0.93			
Acceptance	Male	415	2.84	0.77	-2.85 (794)	.004	0.21
	Female	777	2.97	0.72			
Religion	Male	415	1.65	0.86	-4.78 (925)	.000	0.33
	Female	777	1.91	0.96			
Self-blame	Male	415	2.00	0.80	0.34 (1191)	n.s.	n.s.
	Female	778	1.98	0.77			
Self-distraction	Male	415	2.34	0.78	-5.88 (1191)	.000	0.36
	Female	778	2.62	0.76			
Denial	Male	415	1.68	0.68		n.s.	n.s.

	Female	778	1.74	0.72	-1.40 (1191)		
Substance use	Male	415	1.50	0.73	6.24 (671)	.000	0.51
	Female	778	1.25	0.55			
Behavioral disengagement	Male	415	1.52	0.66	2.07 (1191)	.039	0.13
	Female	778	1.44	0.63			

Note: compiled by the authors

Nevertheless, most of these differences were characterised by small effect sizes ($d < 0.50$), with the only exception again being the Substance use scale. A pattern similar to that observed in the European sample emerged in the Asian sample, regarding coping styles. Once again, significant gender differences were identified in PFC, with women ($M = 3.01$, $SD = 0.59$) scoring higher than men ($M = 2.89$, $SD = 0.58$), $t(1347) = –3.85$, $p < .001$, $d = 0.21$, indicating a small effect size. Comparable results were obtained for EFC, where women ($M = 2.51$, $SD = 0.50$) also scored higher than men ($M = 2.42$, $SD = 0.53$), $t(1347) = –3.36$, $p < .001$, $d = 0.18$. As for AC, no statistically significant differences were observed between women ($M = 2.13$, $SD = 0.45$) and men ($M = 2.09$, $SD = 0.56$), $t(1324) = –1.41$, $p > .05$, mirroring the pattern found in the European sample.

Gender differences in the Asian sample became more distinct when examining coping strategies, which represent the specific facets of coping styles (Carver et al., 1989). However, for the remaining coping strategies, women demonstrated significantly higher mean scores than men. The sole exception was Substance use, where male participants exhibited stronger preferences. In contrast to the European sample, where the most notable gender difference was observed for Substance use, in the Asian sample, a typical effect size was observed for Self-distraction ($d = 0.55$), with women reporting higher mean scores. The data in Table 3 indicate that no statistically significant gender differences ($p > .05$) were observed for Active coping, Emotional support, Humour, Religion, Denial, and Behavioural disengagement.

Table 3. Coping strategies by gender (Asian sample)

Variable	Gender	N	M	SD	t (df)	p	d
Active coping	Male	701	3.00	0.72	-0.62 (1347)	n.s.	n.s.
	Female	648	3.02	0.70			
Use of informational support	Male	700	2.66	0.75	-6.26 (1346)	.000	0.34
	Female	648	2.92	0.77			
Positive reframing	Male	700	2.93	0.73	-2.78 (1346)	.006	0.15
	Female	648	3.04	0.73			
Planning	Male	701	2.97	0.74	-2.13 (1347)	.034	0.12
	Female	648	3.06	0.72			
Emotional support	Male	701	2.58	0.73	-0.67 (1322)	n.s.	n.s.
	Female	647	2.61	0.77			
Venting	Male	701	2.32	0.83	-5.83 (1337)	.000	0.32
	Female	647	2.56	0.70			
Humor	Male	701	2.07	0.92	-0.53 (1347)	n.s.	n.s.
	Female	648	2.09	0.88			
Acceptance	Male	701	2.90	0.72	-4.05 (1347)	.000	0.22
	Female	648	3.06	0.72			
Religion	Male	699	2.54	0.91	-0.35 (1274)	n.s.	n.s.
	Female	647	2.56	1.06			

Self-blame	Male	701	2.10	0.83	-2.17 (1345)	.030	0.12
	Female	646	2.20	0.77			
Self-distraction	Male	701	2.63	0.73	-10.11 (1347)	.000	0.55
	Female	648	3.03	0.70			
Denial	Male	700	2.18	0.76	0.03 (1346)	n.s.	n.s.
	Female	648	2.18	0.75			
Substance use	Male	701	1.71	0.88	5.91 (1333)	.000	0.32
	Female	648	1.45	0.74			
Behavioral disengagement	Male	701	1.86	0.82	-0.45 (1343)	n.s.	n.s.
	Female	647	1.88	0.73			

Note: compiled by the authors

One of the study objectives was to determine whether there were statistically significant interaction effects between gender and cultural context on coping styles and strategies. Although trends toward differences in coping styles were observed, no statistically significant combined effect of gender and culture type was found for any of the three coping styles ($p > .05$). However, for coping strategies, several combined effects of gender and culture type were statistically significant. These were found for Active coping ($F(1, 2541) = 9.35$, $p < .01$), Positive reframing ($F(1, 2540) = 3.99$, $p < .05$), Emotional support ($F(1, 2540) = 21.66$, $p < .001$), Religion ($F(1, 2537) = 9.56$, $p < .01$), and Self-distraction ($F(1, 2541) = 4.13$, $p < .05$).

For Active coping, the results revealed that Asian men ($M = 3.00$, $SD = 0.72$) valued this strategy more highly than European men ($M = 2.92$, $SD = 0.80$). The opposite tendency was observed among women, with European women ($M = 3.13$, $SD = 0.74$) reporting a greater preference for this coping strategy than Asian women ($M = 3.02$, $SD = 0.70$) (see Tables 2 and 3). Regarding Positive reframing, participants from Asian cultures, both men and women, scored higher than Europeans. The difference was especially pronounced among men, with Asian men ($M = 2.93$, $SD = 0.73$) scoring higher than European men ($M = 2.68$, $SD = 0.74$).

The results concerning Emotional support also yielded notable cross-cultural distinctions. Across both regions, women scored higher than men, indicating that seeking emotional support is a predominantly feminine coping pattern. Yet, interestingly, Asian men ($M = 2.40$, $SD = 0.80$) scored higher on this strategy than European men ($M = 2.58$, $SD = 0.73$), while the opposite trend was observed among women—European women ($M = 2.72$, $SD = 0.83$) showed greater preference for Emotional support than Asian women ($M = 2.61$, $SD = 0.77$).

A clearly defined pattern was also found for the Religion strategy. Participants from Asian cultures reported a stronger reliance on religious coping than those from European cultures, with this difference more pronounced among men than among women (see Tables 2 and 3). A similar trend emerged for Self-distraction: Asian participants, particularly women, reported greater use of this strategy compared to Europeans. This finding suggests that distraction-oriented coping may play a more substantial role in collectivist cultures, particularly among women.

hypothesis revealed clear gender distinctions in coping styles, most notably in PFC and EFC, where women exhibited higher preference levels than men.

The greater use of EFC among women can be explained by their stronger tendency to seek emotional support when faced with traumatic or stressful situations. Their pronounced

5. DISCUSSION

The analysis of the research findings demonstrates that both gender differences and cultural background significantly influence the ways individuals cope with challenges during a health crisis. The results supporting the first

preference for PFC also has a clear psychological basis. Women's traditional social role—centred around caring for the well-being of close others and protecting children's health—often shapes their self-perception as the emotional and practical pillar of the family. Consequently, they are more likely to engage in active problem-solving when external threats jeopardise family safety and stability.

Regarding AC, gender differences were not statistically significant; however, there was a discernible tendency for men to favour this coping style slightly more than women (see Table 1). This pattern may be associated with men's relatively greater inclination not to comply with the restrictive rules and restrictions imposed by official institutions during the pandemic, resulting in a greater preference for AC among men than among women. Such tendencies may reflect broader attitudes of autonomy, independence, or scepticism toward authority. Furthermore, avoidant coping often involves the use of alcohol or drugs as temporary mechanisms for escaping distressing realities-behaviours that, consistent with prior studies, are more prevalent among men (Thompson et al., 2021; Branquinho et al., 2022).

To further elucidate the roots of these gender differences, it is essential to examine distinctions in specific coping strategies. As indicated in Figure 1, women compared to men were more inclined to adopt strategies such as Active coping, Use of informational support, and Positive reframing, which constitute facets of PFC. These findings reinforce the notion that, in their efforts to safeguard family members and mitigate infection risk, women tend to employ proactive, information-oriented coping behaviours, often paired with optimism and cognitive reframing of stressful events. Moreover, women's higher scores in strategies such as Emotional support, Venting, and Acceptance—all components of EFC—further substantiate their reliance on interpersonal and emotional regulation mechanisms when confronted with stress. This pattern explains the overall dominance of women in the EFC style.

In contrast, men showed a pronounced preference for the Substance use and Behavioral disengagement strategies. Substance use, entailing alcohol or drug consumption as a means of momentary stress relief-serves as an avoidance-based response to anxiety and uncertainty. Similarly, Behavioral disengagement reflects a withdrawal from active coping efforts, often manifesting as resistance to or non-compliance with restrictive public health measures. The prevalence of these two strategies among men clarifies why men's overall preferences for AC exceed those of women.

An essential aspect of this study is whether different cultural environments, individualistic versus collectivistic—influence differently the coping preferences of men and women. The results indicate that, in both European and Asian samples, women exhibited higher preference levels for PFC and EFC. In contrast, AC did not show statistically significant gender differences in either cultural context.

When examining individual coping strategies, several interesting patterns emerge (Tables 2 and 3). European and Asian women, unlike men in their respective regions, were primarily oriented toward PFC, which encompasses multiple strategies: Active coping, Planning, Use of informational support, and Positive reframing. In the European sample, Active coping was the most influential contributor to gender differences, indicating that women in individualistic cultures are highly emancipated and actively engage in family and personal responsibilities, particularly in health crises.

For Asian women, the PFC orientation is driven more by Planning, Use of informational support, and Positive reframing, which distinguishes them from Asian men. These strategies emphasise the acquisition and use of supportive information, the maintenance of positive attitudes and optimism, and the consideration of future coping actions. In other words, the dominance of PFC among Asian women appears to reflect a proactive, yet contextually constrained, approach to

managing life-threatening challenges.

Another interesting point that deserves attention in this case is that, within an individualistic culture, European men showed a higher preference for Humor, Behavioral disengagement, and Substance use compared to European women. This suggests that European men may perceive critical situations more lightly, using humour, disregarding restrictions, or seeking temporary relief through alcohol and drugs as mechanisms to manage stress and mitigate the risk of depressive states. European women, by contrast, were more impacted by the pandemic, as evidenced by their reliance on strategies such as Emotional support, Venting, Religion, and Self-distraction. They seek emotional support to a much greater extent (Emotional support), use all kinds of ways to get rid of negative thoughts and experiences (Venting), indulge in meditation or find comfort in God (Religion), and ultimately, in other to distract themselves and save themselves from depression, they take up some work, go to the cinema, go shopping or watch TV (Self-distraction). The great concern for family and children, which is a main characteristic of the female role, is probably the reason why the situation accompanying the health crisis is much more traumatic for European women than for European men. This finding is consistent with other research indicating that the COVID-19 pandemic has a greater negative impact on women's mental health compared to men (Kupcova et al., 2023; Laufer & Bitton, 2021).

In the Asian sample, gender differences presented a different pattern. No statistically significant differences were observed in Active coping, Emotional support, Humour, Religion, Denial, or Behavioural disengagement. The lack of differences in Emotional support and Religion suggests that, in collectivist cultures, both men and women actively seek emotional and spiritual resources during health crises. Similarly, the absence of gender differences in Behavioral disengagement implies comparable compliance with official restrictions among Asian men and women. However, Asian men still showed a greater tendency than women to employ avoidance strategies such as alcohol and drug use to alleviate stress and cope with the traumatic reality of the pandemic.

A key finding of this study concerns the combined effects of gender and cultural context on coping behaviours. Asian men were more proactive than European men in responding to pandemic challenges. On the other hand, European men's dramatically low activity is compensated by European women, who use Active coping strategies to a much higher degree than Asian women. This difference may reflect the greater emancipation and public involvement of European women, who actively participate in family, business, and community roles. In collectivist cultures, where masculine norms predominate, women's social and public activities are more restricted; nevertheless, they demonstrate active engagement within the family, particularly through strategies such as Positive reframing, optimism, and future-oriented planning. These coping behaviours, together with Active coping, underpin the dominance of women over men in both European and Asian samples, albeit expressed differently according to cultural norms. In other words, in collectivist cultures where masculinity dominates over femininity, women's social activity and expression during a pandemic are more limited; however, instead, they play a much more active role within the family through their positive outlook, optimism, and belief in a better future

Another noteworthy finding concerns the combined effects of gender and cultural context on the Emotional support strategy, a component of EFC. This strategy primarily reflects two basic needs: receiving emotional support from others and obtaining comfort and understanding in stressful situations. The results reveal that European men, unlike the other three groups, exhibit the lowest preference for Emotional support. The gender difference in the European sample is pronounced, highlighting that, within an individualistic cultural context during a health crisis, European women demonstrate an

exceptionally high need for emotional support, whereas men show the opposite tendency. As noted previously, European men appear to compensate for this deficit through Substance use, while European women's engagement in alcohol and drug use remains comparatively low. In contrast, the Asian sample shows no such pronounced gender disparity in the use of Emotional support, which can be explained by the collectivist cultural emphasis on close social ties, loyalty, and mutual assistance (Hofstede, 1991).

Similarly, the Religion strategy, another facet of EFC, illustrates significant interactions between gender and culture. In the Asian collectivist context, men and women utilise this strategy equally, engaging in prayer, meditation, or other forms of spiritual coping during the health crisis. Conversely, in the European individualistic context, both men and women show relatively low preference for religious coping, reflecting cultural norms in which reliance on religious beliefs is less central to stress management. It is also not surprising that there are drastic gender differences in this strategy, between Europeans on the one hand and Asians on the other. Overall, the prominence of the Religion strategy among Asian participants underscores the role of traditional spiritual beliefs as a distinguishing feature of collectivist cultures.

The analysis of the Self-distraction strategy, an aspect of AC, reveals analogous patterns. Asian participants, regardless of gender, report a higher preference for this strategy compared to Europeans, suggesting a greater capacity to manage stress and anxiety through constructive distraction, such as engaging in leisure activities (e.g., cinema, television, shopping). In contrast, lower use of Self-distraction among Europeans—particularly European men—is compensated by higher engagement in Substance use and Behavioral disengagement, indicating that avoidance-oriented coping in this group is more associated with risk behaviours, disobedience, and non-compliance with restrictions rather than benign distraction activities.

This comprehensive analysis of coping styles and strategies provides a nuanced understanding of gender- and culture-specific differences in coping during health crises. Moreover, it underscores the diagnostic and prognostic value of the Brief-COPE instrument, highlighting its potential as a research tool for coping behaviours in future health crises.

6. CONCLUSION

The present study demonstrates the way both gender and cultural background influence coping styles (PFC, EFC, and AC) and specific coping strategies during a global health crisis. Women consistently preferred PFC and EFC, reflecting proactive and emotionally engaged approaches, whereas men showed a relative inclination toward AC, though this tendency was less pronounced.

Analysis of individual coping strategies revealed notable gender differences, particularly in Active coping, Positive reframing, Emotional support, Religion, and Self-distraction, with these strategies showing statistically significant gender and culture interactions. These findings highlight that coping behaviours are shaped not only by gender but also by cultural norms, with collectivist and individualist environments influencing the adoption and intensity of specific strategies.

Understanding the interplay of gender and culture in coping is crucial for developing targeted interventions and public health policies. Such insights can inform strategies to support psychological resilience, optimise adaptive coping, and manage health-related behaviours during future pandemics or other global health crises.

AUTHOR CONTRIBUTION

Writing – original draft: Krum Krumov, Johann F. Schneider, Albena K. Krumova.

Conceptualization: Krum Krumov, Jin Liu, Albena K. Krumova.
Formal analysis and investigation: Krum Krumov, Johann F. Schneider, Eko Widodo.
Development of research methodology: Krum Krumov, Johann F. Schneider, Jin Liu, Eko Widodo.
Resources: Jin Liu, Albena K. Krumova, Eko Widodo.
Software and supervision: Krum Krumov, Johann F. Schneider, Eko Widodo.
Data collection, analysis, and interpretation: Johann F. Schneider, Jin Liu, Albena K. Krumova, Eko Widodo.
Visualization: Jin Liu, Albena K. Krumova.
Writing – review and editing: Krum Krumov, Johann F. Schneider, Albena K. Krumova, Eko Widodo.

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AUTHOR BIOGRAPHIES

***Krum D. Krumov** – PhD, Dr. Habil., Professor, Sofia University St. Kliment Ohridski, Sofia, Bulgaria. Email: prof.krumov@gmail.com, ORCID ID: https://orcid.org/0000-0003-1066-839X

Johann F. Schneider – Dr. Phil., Dr.h.c., Saarland University, Saarbrücken, Germany. Email: johann-f.schneider@t-online.de

Jin Liu – PhD, Associate Professor, Beijing Institute of Technology, Beijing, China. Email: chisude@126.com, ORCID ID: https://orcid.org/0000-0001-7066-1400

Albena K. Krumova – PhD, Associate Professor, Sofia University "St. Kliment Ohridski", Sofia, Bulgaria. Email: albena.k.krumova@gmail.com, ORCID ID: https://orcid.org/0000-0001-7663-5836

Eko Widodo – PhD, Professor, Atma Jaya Catholic University of Indonesia, Jakarta, Indonesia. Email: eko.widodo@atmajaya.ac.id, ORCID ID: https://orcid.org/0000-0002-2693-3023