

# Religious Coping During the COVID-19 Pandemic: Gender, Occupational and Socio-economic Perspectives Among Malaysian Frontline Healthcare Workers

## ABSTRACT

**Objective:** At the dawn of the new decade of the 20th century, the world was taken aback by the scourge of the COVID-19 pandemic. The study aimed to study the nature of religious coping of frontline healthcare workers seen through the perspective of gender, socio-economic status, and occupation.

**Methods:** An online-based study was carried out among frontline healthcare workers involved in the care of COVID-19 patients (n = 200). Sociodemographic data form and the Brief Religious Coping scale were used in this study.

**Results:** There were more female healthcare workers (60.5%) and doctors (69.5% vs. 30.5%). Healthcare workers used more positive religious coping than negative religious coping (median score: 22 vs. 9). Positive religious coping was seen more in females (median score: 23 vs. 21,  $P = .015$ ). Non-doctors applied positive coping more than doctors (median score: 26 vs. 21,  $P < .001$ ). There were significant differences in positive religious coping scores across income groups, with the B40 group having the highest score (median score: 24). Post hoc pairwise comparison concluded that the B40 group had significantly higher positive religious coping scores than the M40 group.

**Conclusion:** Positive coping was utilized more among female healthcare workers, non-doctors, and the lowest socio-economic group. As prior literature has shown that positive religious coping is desirable and has superior mental health outcomes, our findings show that more effort should be channeled into enhancing positive religious coping, particularly among male healthcare workers, doctors, and the middle and high socio-economic group.

**Keywords:** COVID-19, occupations, income, social class, economic status

## Introduction

The new decade of the 20th century was ushered in by the unpleasant spread of a new type of coronavirus, termed 2019-nCoV/SARS-CoV-2 by the World Health Organization. Due to its fast mode of transmission from human-to-human, it rapidly escalated to a crisis on a global scale, leading to most countries in the world declaring nationwide lockdown measures and curfews.<sup>1</sup> The figures are sobering; at the time of writing, there were 111 439 939 cases reported globally and 288 229 cases registered in Malaysia.<sup>2</sup> Besides its main presentation of pneumonia, the virus also had devastating mental health effects such as anxiety, panic, depression, and burnout, particularly among frontline healthcare workers.<sup>3</sup> Adverse mental health outcomes during a pandemic situation are a real concern. They can quickly escalate into mental health emergencies, such as suicide and burnout, necessitating effective strategies to protect the mental health outcomes of the frontline healthcare workers.<sup>4,5</sup> As such, there have been global efforts by the mental health fraternity to care for both patients and healthcare workers by employing strategies such as psychological first aid and supportive

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psychotherapy.<sup>5,6</sup> Previous research identified that negative coping strategies are detrimental to eventual mental health outcomes and psychological distress.<sup>7</sup> It is important, thus, that effective coping mechanisms are implemented.

Religion is an important part of the fabric of many cultures, and as such religious coping is an important strategy in maintaining positive mental health outcomes during the COVID-19 pandemic. Indeed, reliance on faith and religion has been shown to help emotionally and fortify the immune system by virtue of its action on cellular and humoral immunity and cytokines.<sup>8</sup> In fact, the effect of religion has been shown to impact spiritual health and mental and physical health as well.<sup>9,10</sup> Religious coping refers to the reliance on religion to wade through the proverbial troubled waters. Positive religious coping is defined by a healthy dependence on God for reprieve during a crisis. In contrast, negative religious coping connotes a conflicted relationship with religion and God, often attributing problems as a form of divine punishment.<sup>11</sup> In literature, positive religious coping has been generally regarded as adaptive, whereas negative religious coping was significantly associated with adverse mental health outcomes.<sup>12</sup> In fact, in recent literature, positive religious coping was associated with less loneliness during the pandemic,<sup>13</sup> while negative religious coping was associated with depression, stress, and anxiety<sup>14</sup> among healthcare workers.

Gender and socio-economic status (SES) have often been associated with religiosity and religious coping. The common notion that females are superior to their male counterparts in religion and religious coping can be traced to Freudian roots. According to Freudian theorists, girls emerge from their infantile sexuality post-Electra complex, developing a strong, loving bond with their father. As God is viewed as a father-figure, these feelings are projected unto God, enabling them to be more religious.<sup>15</sup> Another less controversial theory is that the female attraction to God is a means to overcome their innate personality of guilt and frustration.<sup>16</sup> SES, on the other hand, does not have such a clear relationship with religious coping. While some have stated that lower social classes embrace religiosity and thus religious coping more fervently, others postulated that higher-income class is more religious by virtue of their access to socialization and exposure to religious involvement.<sup>17</sup>

Malaysia consists of a multi-ethnic, multi-religious background with Islam as its official religion. A recent survey found that 61.3% of Malaysians professed Islam, followed by Buddhism (19.8%), Christianity (9.8%), and Hinduism (6.3%).<sup>18</sup> Although Islam is the official religion, and other religions are practiced freely without any hindrance. The common shared thread among the 4 main religions forms the main tenets of religious harmony, enabling Malaysians to live in relative religious harmony over the years. Prior Malaysian studies on religious coping have been done among medical

students<sup>19</sup> and psychiatric patients.<sup>20</sup> In their recent work on religious coping and mental health wellbeing among healthcare workers, Chow et al. found that healthcare workers employed more positive than negative coping strategies when dealing with their struggles. Additionally, positive religious coping was associated with reduced anxiety, in contrast to negative coping, increasing anxiety and depression among healthcare workers.<sup>21</sup> However, to date, their little data on how gender affects religious coping strategies, especially during a pandemic setting. Given the centrality of religion in Malaysia, the authors set out to study the different perspectives of religious coping among frontline healthcare workers during the COVID-19 pandemic.

## Methods

This was a cross-sectional study conducted in May 2020, during the peak of the pandemic in Malaysia. It was carried out among frontline healthcare workers in University Malaya Medical Centre (UMMC), a tertiary hospital in Kuala Lumpur, the capital of Malaysia. UMMC was officially selected as a COVID-19 hospital by the government and tasked to screen, quarantine, and manage COVID-19 patients. Since face-to-face interaction was discouraged during the pandemic, an online recruitment mode was done via the Google Forms platform. The process of informed consent was also conducted via the platform. Convenience sampling was used, and consenting front-liners were asked to answer digitized scales on the platform. For this study, “frontline healthcare worker” was defined broadly as a healthcare worker providing essential service and care for patients with COVID-19. A total of 200 healthcare workers consented to participate in this study. The inclusion criteria were as follows:

- Frontline healthcare workers in UMMC,
- Malaysian national, and
- Have a religious belief.

The only exclusion criterion was the refusal to participate in the study. This study was approved by the UMMC Medical Research Ethics Committee (MREC 202044-8445).

## Statistical Analysis

Socio-demographical information was collected via an investigator-constructed online form. SES was measured using monthly income classes as a proxy. Religious coping was measured using the Brief Religious Coping scale (BRCOPE), which was validated for use in Malaysia.<sup>22</sup> The BRCOPE scale consists of 2 subscales assessing religious coping: positive and negative coping (PCOPE and NCOPE, respectively). Pargament defined religious coping as ways to deal with the stressors of life through a sacred prism.<sup>23</sup> Each scale consists of 7 items each, amounting to a total of 14 items. Positive coping reflects a positive relationship with the Almighty in times of distress. On the other hand, negative coping refers to interpersonal struggles and conflict with the omnipotent presence of God in challenging times.<sup>24</sup> This scale was translated and validated for use in the Malaysian population (Cronbach Alpha 0.87 for positive coping and 0.88 for negative coping).<sup>22</sup>

This study analyzed data using the SPSS version 25.0 (IBM Corp., Armonk, NY, USA). The normality of continuous variables (positive and negative religious coping) was evaluated using Z values of skewness and kurtosis. Absolute Z values over 3.29 indicate

## MAIN POINTS

- Healthcare workers used more positive religious coping than negative religious coping in dealing with challenges regarding the pandemic.
- Females and non-doctors used more positive religious coping.
- The lowest socio-economic group had the highest positive religious coping score.

non-normally distributed data.<sup>25</sup> Sociodemographic information was presented via the number of samples (*n*) and percentages (%), encompassing age, gender, income, occupation, religion, and department of work. Median, minimum, and maximum values were utilized to describe positive and negative religious coping. Religious coping variables were stratified according to gender, occupation, and income classes and their median compared using the Mann–Whitney *U*-test and Kruskal–Wallis tests. Post hoc pairwise comparisons were conducted and interpreted using Dunn–Bonferroni correction test. The income class variable was selected as a measure of SES. A significance level of  $P < .05$  was used in this study, while an adjusted *P*-value of .016 was used after Bonferroni correction for pairwise comparisons among income classes. The income class variable was selected as a measure of SES. A significance level of  $P < .05$  was used in this study.

## Results

Table 1 described the sociodemographic data of the healthcare workers studied. Most of the study participants were in the 31-40 years age group (70.5%), followed by the 20-30 years of age (25.5%). There were more female healthcare workers (60.5% vs 39.5%) and doctors compared to non-doctors (69.5% vs 30.5%). The Emergency Department yielded the greatest number of participants (37.5%). The Department of Statistics Malaysia categorized the monthly household income of Malaysians into 3 groups: Top 20% (T20), Middle 40% (M40), and Bottom 40% (B40). The highest income earners were in the T20 group, followed by the M40 and the B40 group.<sup>18</sup> Most of our healthcare workers were in the M40 income group (63%), earning between RM4001 and RM8000 (equivalent to 916 USD–1833 USD). Akin to Malaysia's religious demographics, the dominant religious belief of the healthcare workers was Islam (55.5%), followed by Buddhism (31.0%) and Christianity (7.5%).

The normality test was conducted via the Shapiro–Wilk Test. It revealed a *P*-value of  $< .001$  for both positive and negative religious coping, indicating that the data were not normally distributed. Additionally, the absolute *Z*-scores for positive and religious coping were 5.13 and 7.78, respectively, which were both over 3.29, corresponding with an alpha level of 0.05 and pointing to non-normal distributions. The healthcare workers in our study used more positive religious coping compared to negative religious coping (median score: 22 vs. 9) (Table 1).

Positive religious coping was seen more in females than male healthcare workers (median score: 23 vs. 21,  $P = .015$ ). On the other hand, negative religious coping was similar between both sexes but was statistically insignificant ( $P = .597$ ). Non-doctors applied more positive coping (median score: 26 vs. 21,  $P < .001$ ) and negative religious coping (median score: 11 vs. 9,  $P = .005$ ) (Tables 2 and 3).

There was a significant difference across income groups regarding positive religious coping ( $P = .004$ ), with the B40 group having the highest positive religious coping score (median score: 24). The difference between the income groups for negative religious coping was insignificant ( $P = .112$ ) (Table 4). Post hoc pairwise comparison was conducted for positive religious coping and revealed that the

**Table 1. Sociodemographic Characteristics of Frontline Healthcare Workers (n = 200)**

Sociodemographic	n (%)
Age range	
20-30	51 (25.5)
31-40	141 (70.5)
41-50	7 (3.5)
≥51	1 (0.5)
Gender	
Male	79 (39.5)
Female	121 (60.5)
Monthly income (RM)	
B40 (<4000) <sup>a</sup>	47 (23.5)
M40 (4001-8000) <sup>b</sup>	126 (63.0)
T20 (>8000) <sup>c</sup>	27 (13.5)
Occupation	
Doctor	139 (69.5)
Non-doctors <sup>d</sup>	61 (30.5)
Religion	
Islam	111 (55.5)
Buddhism	62(31.0)
Christianity	15 (7.5)
Hinduism	8 (4.0)
Others	4 (2.0)
Department	
Emergency	75 (37.5)
Primary Care	41 (20.5)
Anesthesia	38 (19.0)
Internal medicine	8 (4.0)
Others <sup>e</sup>	38 (19.0)
Median PCOPE score (min–max)	22 (7-28)
Median NCOPE score (min–max)	9 (7-28)

<sup>a</sup>B40: Bottom 40% group.

<sup>b</sup>M40: Middle 40% group.

<sup>c</sup>T20: Top 20% group.

<sup>d</sup>Allied Health Care: Nurse, Assistant Medical Officer, Medical Attendants.

<sup>e</sup>Ophthalmology, Psychiatry, Surgery, Pediatrics, Oncology, Nursing, Rehabilitation Medicine.

PCOPE, Positive Religious Coping subscale; NCOPE, Negative Religious Coping subscale.

**Table 2. Comparison Between Gender and Religious Coping (n = 200) via Mann–Whitney *U*-Test**

Measure	n (%)	Median (Min–Max)	<i>P</i>
PCOPE			
Male	79 (39.5)	21 (7-28)	.015
Female	121 (60.5)	23 (7-28)	
NCOPE			
Male	79 (39.5)	9 (7-28)	.597
Female	121 (60.5)	9 (7-23)	

PCOPE, Positive Religious Coping subscale; NCOPE, Negative Religious Coping subscale.

**Table 3. Comparison Between Profession and Religious Coping (n = 200) via Mann–Whitney U-Test**

Measure	n (%)	Median (Min–Max)	P
PCOPE			
Doctors	139 (69.5)	21 (7-28)	<.001
Non-doctors	61 (30.5)	26 (7-28)	
NCOPE			
Doctors	139 (69.5)	9 (7-28)	.005
Non-doctors	61 (30.5)	11 (7-22)	

Non-doctor: allied healthcare workers and non-clinicians.

PCOPE, Positive Religious Coping subscale; NCOPE, Negative Religious Coping subscale.

**Table 4. Association Between Income Classes with Positive and Negative Religious Coping Scales via the Kruskal–Wallis test, with Post Hoc Pairwise Comparisons (n = 200)**

Measures	n (%)	Median (Min–Max)	P	Pairwise comparisons, P
PCOPE				
Group 1	47 (23.5)	24 (7-28)	.004	I-II: .003
Group 2	126 (63.0)	21.5 (7-28)		I-III: .065
Group 3	27 (13.5)	21 (7-28)		II-III: 1
NCOPE				
Group 1	47 (23.5)	10 (7-19)	.112	
Group 2	126 (63.0)	9 (7-28)		
Group 3	27 (13.5)	7 (7-23)		

Group 1: B40 (<RM4000); Group 2: M40 (RM4001-8000); Group 3: T20 (>RM8000). PCOPE, Positive Religious Coping subscale; NCOPE, Negative Religious Coping subscale; RM, Ringgit Malaysia.

B40 group (group 1) had significantly higher positive religious coping scores than the M40 group (group 2).

## Discussion

The COVID-19 pandemic's unprecedented toll on the modern healthcare system has resulted in a sharp spike in mental health distress among doctors, nurses, and other healthcare staff at the front-line.<sup>26</sup> Fear of the unknown coupled with the sheer volume of work combined to accelerate the mental health burnout faced by healthcare workers. A recent study demonstrated that fear of coronavirus predicted and mediated the presence of depression, anxiety, and stress among healthcare professionals.<sup>27</sup> Additionally, coronavirus fear was shown to mediate the relationship between the perceived risk of being infected by a coronavirus and parental coronavirus anxiety.<sup>28</sup> As such, effective coping is needed to stem the deleterious effects on the frontline staff. In particular, the COVID-19 pandemic has had far-reaching implications on religious behavior, weaving a complex web of interaction between religion and mental health. Indeed, religion and coping do not necessarily have a linear interaction. On the one hand, religion is a common form of coping in these circumstances, and general religiousness has been associated with positive appraisals in the face of calamity.<sup>29,30</sup> In fact, religious coping increased during the COVID-19 pandemic, as seen by the increased number of people driven to pray.<sup>31</sup> However, fervent religiosity has unfortunately expedited the spread of COVID-19 in some cases.

Some notable religious clusters comprising Christians, Jews, and Muslims have been documented to neglect social distancing and hygiene measures in the name of religion, only to further propagate the virus's spread.<sup>32</sup> Building on this wealth of COVID-19 related literature, our study assesses the religious coping of healthcare workers during the COVID-19 pandemic.

In our study, healthcare workers utilized more positive religious coping. This preference for using positive religious coping among Asians is also seen in a prior study analyzing religious coping among psychiatric patients.<sup>20,33</sup> In times of crisis, healthcare workers tend to increase their reliance on God to deliver them from catastrophe. This could stem from deep-seated faith that the Almighty will deliver them from peril and never forsake them. The utilization of positive religious coping among our Muslim-majority healthcare workers is beneficial, as it has been shown that this method of religious coping has been associated with desirable outcomes among Muslims.<sup>34</sup> Our results also showed that non-doctor healthcare workers used more positive religious coping than doctors, such as Koenig and colleagues' findings.<sup>35</sup> This indicates that the former has a greater proclivity to turn toward religion in the pandemic in our population. Interestingly, in our study, negative religious coping among the healthcare workers studied was markedly reduced compared to positive religious coping. This result is encouraging as increasing negative religious coping strategies have been linked to adverse mental health outcomes in various populations.<sup>19,36</sup>

More than a decade ago, Pargament and Abu-Raiya<sup>37</sup> wrote that positive religious coping is increased in females compared to males. This is true in our population as females were noted to score higher in positive religious coping, similar to other studies' data.<sup>38,39</sup> Females, by virtue of their increased susceptibility to psychological distress, are more attuned to religion, leading them to be more receptive to reaching out to God in times of distress.<sup>40</sup> Besides that, the risk preference theory by Miller and Hoffmann<sup>41</sup> posits that religiosity and, by extension, utilization of religion as a coping strategy is a function of the degree of risk-taking. In other words, higher risk propensity is associated with lesser religiosity.<sup>41</sup> Since females are generally viewed collectively as more risk-averse,<sup>42</sup> are thus likely to be more religious and use more positive religious coping. Interestingly, utilization of negative religious coping was markedly reduced across both genders without significant difference. This trend could signify a more benevolent view of God in our population, in contrast to the vindictive and punitive view seen in some cultures.<sup>43</sup>

Socio-economic strata also affect religious coping, though with mixed findings. For example, a Nigerian study showed that diabetic patients from low SES had greater positive religious coping and intrinsic religiosity.<sup>44</sup> However, a study conducted among Indian university students found that there was no significant effect of SES on religiosity and religious coping,<sup>45</sup> like the findings of Regnerus et al.<sup>46</sup> investigating religion among American adolescents. The heterogeneity in the findings reflects the underlying complexity of the relationship between these 2 variables. As postulated by the deprivation-compensation theory,<sup>47</sup> people from low SES turn to Divine Providence in times of need. Our study is consistent with the deprivation-compensation theory, as healthcare workers with the lowest income class (and thus, by extension, the lowest SES) had the highest positive religious coping. Thus, our results add important information regarding

the relationship between SES and religious coping among healthcare workers during a pandemic.

There are some limitations to this study. Firstly, the small sample size and sampling from only one hospital in Malaysia may limit the generalizability of the results. The use of convenience sampling further reduces the chance of the sample population being equally selected, increasing bias. Next, the quantitative design of this study precludes an in-depth description of both positive and negative religious coping methods employed by the healthcare workers. Employing a mixed-method design would have enabled the nuances and themes of religious coping among healthcare workers to be analyzed. Another important limitation is the fact that our study also used self-reported assessments to measure the outcome variables, and as such is open to bias.

In conclusion, our study demonstrated that frontline healthcare workers employed more positive rather than negative religious coping during the COVID-19 pandemic. Healthcare workers who were females, non-doctors, and from low-income classes utilized more positive religious coping. As positive religious coping is adaptive and more constructive, efforts should thus be directed toward the groups with relatively lower positive religious coping: doctors, the middle and high socio-economic groups, and male healthcare workers. Future research should focus on the mental health correlates and associations of religiosity and religious coping among healthcare workers during the COVID-19 pandemic.

**Ethics Committee Approval:** Ethics committee approval was received for this study from the UMMC Medical Research Ethics Committee (Approval Date: Month Day, Year; Approval Number: MREC 202044-8445).

**Informed Consent:** Informed consent was obtained from the individuals who participated in this study.

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