



REVEALING RESILIENCE: COPING STRATEGIES OF PHYSICIANS MANAGING MENTAL STRESS DURING THE COVID-19 OUTBREAK IN BANGLADESH"

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ABSTRACT

The COVID-19 pandemic has placed significant strain on healthcare systems worldwide, with physicians at the forefront of battling the virus. In Bangladesh, a densely populated country, the healthcare system has faced immense challenges due to the rapid spread of the virus. This has resulted in an increased psychological burden on physicians, necessitating effective coping strategies to maintain their mental well-being and provide quality healthcare services. This paper aims to explore the coping strategies employed by physicians in Bangladesh during the COVID-19 outbreak, shedding light on their resilience and informing interventions to support their mental health needs. A cross-sectional study was conducted in four hospitals in Bangladesh, involving 207 physicians. Data was collected through telephone interviews using a structured questionnaire. The study found that physicians employed various coping strategies to manage mental stress, including proper sleep, healthy meals, exercise, prayers, and mutual support. Exercise, particularly cardio exercises and freehand exercises, was found to be popular among physicians. Social support and meditation practices, such as prayers and distraction through studying, were also identified as effective coping mechanisms. The study revealed a significant relationship between coping strategies and mental stress reduction, highlighting the effectiveness of these strategies. The findings contribute to understanding the characteristics and coping strategies of physicians managing mental stress during the COVID-19 outbreak in Bangladesh. This knowledge can inform policymakers and healthcare authorities in developing targeted interventions and support programs to address the unique needs of physicians. Enhancing the resilience and well-being of physicians is crucial for ensuring the provision of quality care to patients during these challenging times.

KEYWORDS: Revealing resilience, Coping strategies, Physicians, Mental stress, COVID-19 outbreak.

INTRODUCTION

The COVID-19 pandemic has caused unprecedented challenges for healthcare systems worldwide, with healthcare professionals at the forefront of battling the virus.^[1] Physicians, in particular, have faced immense pressure and mental stress as they navigate the complexities of this global health crisis.^[2] In Bangladesh, a densely populated country in South Asia, the healthcare system has been significantly strained due to the rapid spread of the virus.^[3] This has placed a tremendous burden on physicians, who are dealing with the dual challenges of managing the physical health of patients and their own psychological well-being. The psychological impact of the COVID-19 outbreaks on healthcare professionals, including physicians, has garnered increased attention from researchers and policymakers.^[4] Understanding the coping strategies employed by physicians in managing mental stress is crucial for supporting their well-being and ensuring the provision of quality healthcare services. This paper aims

to delve into the coping strategies adopted by physicians in Bangladesh amidst the COVID-19 outbreak, shedding light on their resilience and providing valuable insights for addressing their mental health needs. To reveal the coping strategies utilized by physicians, it is essential to first acknowledge the psychological burden they face. The term "psychological burden" encompasses various aspects of mental stress, including anxiety, depression, burnout, and post-traumatic stress disorder (PTSD). Studies have indicated that physicians experience elevated levels of psychological distress during disease outbreaks and epidemics, which can have long-lasting effects on their mental health and professional performance.^[5,6] The current pandemic, characterized by its prolonged duration and overwhelming caseload, has exacerbated these challenges for physicians globally. Bangladesh, with its large population and limited healthcare resources, has been particularly vulnerable to the impacts of the COVID-19 outbreak. Physicians in Bangladesh have faced numerous stressors, including

scarcity of personal protective equipment (PPE), inadequate healthcare infrastructure, overwhelming patient numbers, and the constant fear of contracting and transmitting the virus to loved ones³. These factors, combined with the ever-present risk of burnout and emotional exhaustion, have necessitated the development and implementation of effective coping strategies to help physicians maintain their mental well-being and provide optimal care. Research on coping strategies during disease outbreaks has highlighted the importance of both individual and organizational support systems. Individual coping strategies may include seeking emotional support from colleagues, family, and friends, engaging in stress-reducing activities such as exercise or meditation, and maintaining a healthy work-life balance. Organizational support, on the other hand, involves measures such as providing mental health resources, implementing flexible work schedules, and ensuring sufficient rest periods for healthcare professionals.^[4,2] By examining the coping strategies employed by physicians in Bangladesh, this study seeks to identify effective interventions that can be implemented to support their mental well-being. Insights gained from this research can inform policymakers and healthcare authorities in developing targeted interventions and support programs that address the unique needs of physicians in managing mental stress during the COVID-19 outbreak. Ultimately, enhancing the resilience and well-being of physicians will contribute to the overall effectiveness of the healthcare system, ensuring the provision of quality care to patients in these challenging times. to identify effective interventions that can be implemented to support their mental well-being. Insights gained from this research can inform policymakers and healthcare authorities in developing targeted interventions and support programs that address the unique needs of physicians in managing mental stress during the COVID-19 outbreak. Ultimately, enhancing the resilience and well-being of physicians will contribute to the overall effectiveness of the healthcare system, ensuring the provision of quality care to patients in these challenging times.

MATERIALS AND METHODS

A cross-sectional design was employed to examine the coping strategies for managing mental stress experienced by physicians in Bangladesh during the COVID-19 outbreak. The study was conducted in four hospitals in Bangladesh: Kurmitola General Hospital, Mugdha Medical College & Hospital, AMZ Hospital, and United Hospital Limited. The research was conducted from January to December 2020. The research process consisted of several stages. Initially, an extensive literature review was conducted to gather relevant information on the psychological burden experienced by physicians during the COVID-19 outbreak. Subsequently, a research protocol was developed, outlining the study objectives, methodology, and data collection procedures. The protocol was then presented for review and approval to the Institutional Review Board (IRB) of the National Institute of Social and

Preventive Medicine (NIPSOM). Ethical approval was obtained to ensure the study adhered to ethical guidelines and principles. To assess the coping strategies for the psychological burden of physicians, a structured questionnaire was developed. The questionnaire underwent a pre-testing phase to ensure its validity and clarity. Feedback from a small group of participants was obtained to make necessary modifications and improvements. Data collection was carried out through telephone interviews. Convenient sampling was employed to enroll a sample size of 207 eligible physicians who met the predefined inclusion criteria. The questionnaire covered various aspects, including socio-demographic information, determinants of mental stresses experienced by physicians, factors contributing to the reduction of mental stresses, and an assessment of management and coping strategies employed to alleviate the psychological burden. IBM SPSS version 26 was utilized for data management and analysis. The collected data were entered into the software for cleaning and coding. Descriptive and inferential statistical techniques were applied to analyze the data, enabling a comprehensive understanding of the psychological burden faced by physicians. Graphical representations such as bar diagrams, pie charts, and histograms were utilized to effectively present the findings, providing visual clarity and aiding in the interpretation of the statistical information. Ethical implications were given significant importance throughout the study. Ethical approval was obtained from the IRB to ensure participant rights and privacy were protected. Informed consent was obtained from all participating physicians, emphasizing the voluntary nature of their involvement and guaranteeing their confidentiality. Strict measures were implemented to maintain the anonymity and confidentiality of the collected data. Several limitations should be acknowledged. The use of convenient sampling introduced the potential for selection bias, as participants were not randomly selected. The findings may not be fully generalizable to the entire physician population in Bangladesh. Additionally, there may have been a recall bias as data collection occurred six months after the acute phase of the COVID-19 crisis. The challenging circumstances within the healthcare system during the study period presented difficulties in collecting data over the phone. Furthermore, the study's findings may be limited in their representation of the entire country's scenario, as they were derived from a specific set of hospitals rather than a nationwide sample.

RESULTS

The study included a total of 207 respondents, with 60.4% of them belonging to the age group of 25 to 35 years, and only 1% falling within the 56 to 65-year age range. In terms of gender distribution, 54.10% of the respondents were female, while 45.90% were male. In terms of religious affiliation, 84.50% identified as Muslims, 11.50% as Hindus, 2% as Buddhists, and 2% as Christians. Regarding educational qualifications, 62.30% of the respondents were graduates, while 37.70%

had completed their post-graduation in their respective fields. Among the respondents, 87% were married, 12.1% were unmarried, and 1% were divorced. In terms of family structure, 50.7% belonged to nuclear families, while 49.3% belonged to joint families. Family sizes varied, with 23.70% of respondents having four family members, 1.4% having twelve family members, 1.4% having ten family members, and only 0.5% having eleven family members. Geographically, 28% of the respondents were from the Dhaka division, 13% were from the Khulna division, and 11.60% were from the Mymensingh, Rajshahi, and Chittagong divisions, each accounting for an equal proportion. Additionally, 6.80% of the respondents were from the Sylhet division. In terms of living arrangements, 35.3% of the respondents lived in their own apartments, while another 35.3% lived in rental apartments. Furthermore, 5.8% of the respondents lived in shared apartments. In terms of family composition, 35.3% of the respondents had two children, while 28% had no children. Only 15% of the respondents lived with their in-laws, 8.2% lived with their brothers, and 0.5% had sisters living with them. Regarding work settings, 74.40% of the respondents worked in COVID-19 dedicated government hospitals, and 2.40% worked in COVID-19 dedicated private laboratories. Among the respondents, 57.50% were medical officers, 9.70% were pathologists, 8.20% were registrars, 7.70% were consultants, 4.3% were assistant professors, and only 2.40% were associate professors. Furthermore, 45.40% of the respondents worked in indoor departments, while 0.50% worked in telemedicine. The remaining respondents worked in various departments, including emergency (14.00%), laboratory (12.10%), ICU (10.10%), triage (7.70%), and isolation units (5.80%). Regarding income and expenses, 26.1% of the respondents had a monthly family income exceeding 2.4 lakhs BDT, while 5% had a monthly family income ranging from forty to sixty thousand BDT. In terms of expenses, 36.7% of the respondents had monthly family expenses exceeding 1.5 lakhs BDT, while only 6.3% had expenses of less than fifty thousand BDT. The coping strategies adopted by physicians managing mental stress during the COVID-19 outbreak were analyzed. The majority of respondents reported that proper sleep (91.7%), three healthy meals (76.8%), exercise (62.8%), prayers (94.2%), supporting each other (99.5%), and self-motivation (99.0%) were helpful in reducing mental stress. In terms of exercise, 24.70% engaged in cardio exercises, 24.70% did freehand exercises, 15.30% practiced yoga, 14.70% walked, and 0.70% had the opportunity to swim. The duration of exercise ranged from 10 to 60 minutes, with 62.80% of respondents engaging in exercise, especially during the isolation period. Furthermore, 37.7% of the respondents believed that helping each other during this challenging period reduced mental stress, while only 0.5% disagreed. Regarding meditation, 52.2% of the respondents used prayers, 24.6% found distraction through studying, and 9.7% found solace in spending time with family. Additionally, 29.0% believed that the Buddy System

(pairing and sharing information) always helped reduce mental stress, while 5.8% believed it was occasionally helpful. Coping strategies such as walking (100%), love-kindness meditation (97.6%), and conflict-resolution strategies (95.7%) were adopted by the respondents to mitigate mental stress. The study also found that 55.1% of the respondents had good coping skills, 36.2% had average coping skills, and 8.7% had poor coping skills. Statistical analysis revealed a significant relationship between coping strategies and mental stress reduction ($p < 0.43$), indicating that the coping strategies employed by the physicians were effective in alleviating their mental stress. Overall, the study highlights the various characteristics and coping strategies adopted by physicians managing mental stress during the COVID-19 outbreak in Bangladesh. These findings contribute to a better understanding of the resilience demonstrated by physicians and provide valuable insights for developing interventions to support their mental health needs in similar contexts.

DISCUSSION

The present study examined the characteristics and coping strategies adopted by physicians managing mental stress during the COVID-19 outbreak in Bangladesh.^[7] The findings shed light on the demographics of the respondents, their work settings, living arrangements, and family compositions. Additionally, the study explored the coping strategies employed by physicians and assessed their effectiveness in reducing mental stress. The demographic profile of the respondents revealed that a significant proportion of physicians managing mental stress during the COVID-19 outbreak in Bangladesh were between the ages of 25 and 35 years.^[8] This may indicate that younger physicians were more actively involved in frontline healthcare services during the pandemic. The gender distribution showed a slight majority of female respondents, suggesting that female physicians actively participated in managing the mental stress associated with their work during the outbreak. The religious affiliation of the respondents highlighted the predominantly Muslim background of the physicians in the study, reflecting the religious diversity in Bangladesh. The educational qualifications of the respondents indicated that a majority had completed their graduation, with a significant proportion having pursued post-graduation in their respective fields.^[9] This suggests that the physicians managing mental stress during the pandemic were highly qualified professionals. The marital status of the respondents revealed that a large majority were married, which could potentially have implications for their coping strategies and support systems during the challenging period. Regarding work settings, the study revealed that a substantial percentage of the respondents worked in COVID-19-dedicated government hospitals.^[10] This emphasizes the critical role of public healthcare facilities in managing the pandemic in Bangladesh. The distribution of different medical positions held by the respondents indicated that medical

officers constituted the largest proportion, followed by pathologists, registrars, and consultants. This suggests that physicians across various levels of experience were exposed to the mental stress associated with managing COVID-19 cases. The departments in which the respondents worked reflected the diverse roles they played in different healthcare settings, including emergency, laboratory, ICU, triage, and isolation units. The living arrangements of the respondents varied, with a significant percentage living in their own or rental apartments.^[11] This highlights the need to consider the potential impact of living conditions on the mental well-being of physicians during the outbreak. The family compositions revealed that a considerable proportion had two children or no children, indicating the potential influence of family dynamics on the coping strategies employed by physicians. The coping strategies reported by the respondents demonstrated their resourcefulness and resilience in managing mental stress. Adequate sleep, healthy meals, exercise, prayers, and mutual support were recognized as beneficial in reducing mental stress.^[12] These strategies align with general principles of self-care and mental well-being. Engaging in exercise, particularly cardio exercises and freehand exercises was found to be a popular coping mechanism among the physicians. This highlights the importance of physical activity in managing stress and promoting overall well-being. Additionally, the study highlighted the significance of social support, with a majority of respondents reporting that supporting each other helped alleviate their mental stress. This finding underscores the importance of peer support networks and collaborative efforts among healthcare professionals. Meditation practices, such as prayers and distraction through studying, were also identified as coping strategies. These techniques may have provided the physicians with a sense of calm and helped divert their attention from the stressors of the pandemic. The Buddy System, involving pairing and sharing information, was perceived as a valuable coping strategy by a significant percentage of respondents. This emphasizes the importance of communication and teamwork in managing stress and maintaining resilience. The study's findings indicate that the coping strategies adopted by physicians were effective in reducing mental stress.^[11] The majority of respondents exhibited good coping skills, suggesting their ability to adapt and manage stressors effectively. The statistical analysis further supported the relationship between coping strategies and mental stress reduction, highlighting the significance of these strategies in promoting resilience among physicians. Overall, this study contributes to our understanding of the characteristics and coping strategies adopted by physicians managing mental stress during the COVID-19 outbreak in Bangladesh. The findings underscore the resilience demonstrated by physicians in the face of challenging circumstances. The insights gained from this study can inform the development of interventions and support systems to address the mental health needs of physicians in similar contexts. By prioritizing the well-

being of healthcare professionals, it is possible to enhance their capacity to provide quality care during crises and improve overall healthcare outcomes.

CONCLUSION

This study examined the characteristics and coping strategies of physicians managing mental stress during the COVID-19 outbreak in Bangladesh. The findings provided insights into the demographics, work settings, living arrangements, and family compositions of the physicians. Younger physicians, particularly females, were actively involved in frontline healthcare services. The physicians were highly qualified, and public healthcare facilities played a critical role in managing the pandemic. Different medical positions and diverse roles exposed physicians to mental stress. Living arrangements and family dynamics influenced coping strategies. Effective coping strategies included sleep, healthy meals, exercise, prayers, and mutual support. Physical activity and social support were important in reducing mental stress. Meditation practices and the Buddy System were valuable coping strategies. Overall, the study highlighted the resilience of physicians and the need for interventions and support systems to address their mental health needs.

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