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Effects of Critical Incident Stress Management on Nurses During COVID-19 Pandemic

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ABSTRACT

Objective: To analyze the effect of Critical Incident Stress Management on the mental health of nurses during COVID-19.
Study Design: Quasi-experimental study.
Place and Duration of Study: Combined Military Hospital, Jhelum Pakistan from Mar to Jun 2020.
Methodology: Forty-six nurses were consecutively recruited and evaluated regarding Knowledge about COVID-19, thoughts regarding its origin, emotional reactions, and coping mechanisms. The evaluation was followed by the provision of Critical Incident Stress Management sessions in March. Finally, in the second phase conducted in June, the participants were evaluated again to assess the effect of intervention regarding the above parameters.
Results: Results indicated a statistically significant shift in Knowledge from Social Media to Academic Resources (p<0.001). Thoughts regarding the origin of COVID-19 showed that 'Religious Causes' and belief in 'Religious and Biological Causes both" significantly reduced (p=0.001 and p=0.003, respectively), while opinions regarding 'Biological Causes' increased in frequency (p< 0.001). Emotionally a significant reduction was seen in Confusion (p<0.001). A significant reduction was observed in Religious Rituals (p=0.002) for Coping Mechanisms. However, observing Safety Precautions and Distraction Strategies were insignificantly affected (p=0.668 and p=1, respectively).
Conclusion: Critical Incident Stress Management helped healthcare workers sublimate their emotional reactions and helped them cope with a productive mindset for better management of the pandemic.

Keywords: COVID-19, Critical incident stress management, Paramedics, Psychological impact.

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INTRODUCTION

In Combined Military Hospital (CMH) Jhelum, the first COVID-19-positive case was reported on 14th May 2020. Since then, the number has been increasing. The impact of such an unfamiliar, fatal, and contagious disease is physical and psychological, particularly for Health Care Workers (HCWs), starting from increasingly long work hours to physical discomfort and sometimes even breathing difficulties while wearing personal protective equipment (PPE).[1,2] Moreover, a lack of established protocols or evidence-based clinical treatment led to unpreparedness to carry out duties and fear of the risk of spreading the virus to their family and friends.[3,4] Past studies have shown that HCWs at high risk of exposure to infectious disease outbreaks exhibited extreme stress, were emotionally influenced and traumatized, and had extreme levels of symptoms of depression and anxiety.[5,6]

Critical incidents cause powerful emotional reactions in people exposed to those events, including threats to safety or loss of self or loved ones.[7] Critical Incident Stress Management (CISM) is a crisis intervention that includes personal crisis counseling to accelerate the normal recovery process and resolve reactions to abnormal events to maintain or improve performance.[8,9]

COVID-19 has affected the mental health of everyone, including HCWs in Pakistan. In order to prevent deteriorating emotional reactions from developing in nursing staff and to ensure efficient working, CISM sessions can work as a psychological first aid and improve mental outcomes.[10] However, no such first aid program is preplanned in any Pakistani healthcare institution or organization to cater for its staff's emotional needs and ensure its personnel's effective functioning. Hence, with this study, we aimed to check the effects of CISM on the emotional management of HCWs, particularly the nurses during the COVID-19 pandemic, so that a preplanned in-house interventional program can be developed beforehand for the mental health of HCWs to cater for such challenges more effectively.

METHODOLOGY

The quasi-experimental study was conducted in two phases at CMH Jhelum Pakistan, from March to June 2020. The Institution Review Committee approved the study (No. 1113/Estb).

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Inclusion Criteria: All nurses available in the hospital were included through consecutive sampling.

Exclusion Criteria: Any nurse with a premorbid psychiatric illness were excluded from the study.

The first phase of the study was conducted from March 27 to April 10, in which nurses were individually evaluated and subsequently provided CISM sessions by clinical psychologists of the hospital on predetermined parameters under the supervision of a consultant psychiatrist. The clinical psychologist had three years of experience in the hospital and with HCWs. These parameters included; Source of Knowledge about the COVID-19 Pandemic (Social Media or Medical literature).[11] Opinion about the Origin of the COVID-19 Pandemic (Medical, Biological, Religious, Both Medical and Religious, or Uncertain).[12] Resultant Emotions (Confusion, Fear, Reactive Depression, Anxiety, Sadness, Anger, Hypervigilance, Moodiness, Emotional numbing) and finally Adopted Coping Strategies (Safety Precautions, Religious Rituals, or Distraction Strategies).[13,14] In the CISM sessions, participants were provided factual information, counselled for emotional disturbances, and briefed about coping mechanisms to deal with the COVID-19 pandemic more stably.

The second phase took place in June from 15 to 26, in which all participants were reassessed on the same parameters (Source of Knowledge, Opinion regarding Origin, Resultant Emotions, and Coping Strategies).

Data were described as frequencies and percentages using the Statistical Package for Social Sciences version 20 (IBM SPSS Statistics, Armonk, NY). Comparing proportions of different variables of interest before and after the intervention was conducted online through a 2-sample z-test to Compare Sample Proportion using Epitools-Epidemiological Calculators. The *p*-value lower than or up to 0.05 was considered as significant.

RESULTS

A total of 46 nurses participated in this study. It was observed that in the initial assessment, participants were resorting to Social Media more (34,77.3%) as the Source of Knowledge than Academic Resources (10,22.7%) (Table). Their Opinions about the Origin of COVID-19 were primarily Religious (12,27.3%). At the onset of the disease, the common emotions felt were Confusion (26,56.5%), Fear (9,19.6%), and Anxiety (9,19.6%). Participants primarily observed Religious Rituals (23,50%) to cope with these emotions and stressors, followed by Distraction Strategies (14,30.4%).

Table: The Parameter Wise Analysis (n=46)

Source of Knowledge	First Evaluation	Second Evaluation	*p*-value
Social Media	34(77.3)	13(28.3)	<0.001
Medical literature	10(22.7)	33(71.7)	<0.001
Missing values	2	-	-
Opinion about Origin of COVID-19 Pandemic			
Medical	5(11.4)	6(14.6)	0.66
Biological	5(11.4)	22(53.7)	<0.001
Religious	12(27.3)	1(2.4)	0.001
Both Medical and Religious	11(25)	1(2.4)	0.003
Uncertain	11(25)	11(26.8)	0.85
Missing values	2	5	-
Resultant Emotions			
Confusion	26(56.5)	4(8.7)	<0.001
Fear	9(19.6)	5(10.9)	0.246
Anxiety	9(19.6)	7(15.2)	0.578
Depression	1(2.2)	3(6.5)	0.312
Anger	-	3(6.6)	-
Sadness	-	13(28.9)	-
Moodiness	-	3(6.6)	-
Hypervigilance	-	1(2.2)	-
Emotional numbing	-	3(6.6)	-
Coping Strategies Adapted			
Safety Precautions	14(30.4%)	14(30.4%)	1.00
Religious Rituals	23(50%)	9(19.6%)	0.002
Distraction Strategies	18(39.1%)	20(43.5%)	0.668

After the CISM session, in the second assessment, it was observed that participants were more inclined towards Academic Resources (33,71.7%) as a Source of Knowledge about COVID-19. Their Opinions regarding the Origin of COVID-19 revealed attribution to Biological (22,53.7%) and Uncertain causes (11,26.8%). The major emotions observed were Anxiety and Fear. Coping mechanisms employed were Distraction Strategies in 20(43.5%) and Safety Precautions in 14(30.4%) participants. There was a statistically significant decrease in Knowledge sought from Social Media and an increase in Knowledge from Academic Resources, with a *p*-value of <0.001 between March to June. For Coping Mechanism, it was observed that from March to June, a significant reduction was witnessed in observing Religious Rituals (50% to 19.6%, p=0.002). However, observance of Safety Precautions and distraction strategies was insignificantly affected (31% to 28.9%, p=0.84) and (39.1% to 43.5%, p=0.668), respectively.

DISCUSSION

The significant shift in Sources of Knowledge shows the impact media plays in propagating an

agenda and how deeply it influences the masses. Dispersal of false and inauthentic information and emphasis on mortality rate instead of recoveries produced a state of panic. Our research shows that as participants sought information from Medical Literature, their thoughts regarding the origin of COVID-19 and other information became scientific. Once equipped with authentic information, exposure and handling of infected patients allowed the participants to settle ambiguities and provided clarity.[14] This reduced the Anxiety and Fear responses initially observed, while other emotions like Sadness and Frustration emerged due to the lockdown.[15,16]

Generally, some anxious thoughts persisted throughout the months, mainly related to disruption in the sense of security, health and death, including concern for being the source of infection for their families due to exposure, feeling homesick, fear for family members catching the virus and fear for oneself catching the virus.[17] It was also observed in our research that during the initial evaluation, due to uncertainty about the disease, fear of catching the virus while being unsure of the outcomes and lack of treatment knowledge made people develop a stigma around the people affected. It created a sense of being stigmatized and isolated among those threatened with exposure, e.g. those working in COVID-19 wards. In a study by Heath *et al*.[18] providing care appeared emotionally difficult for HCWs. Uncertainty, stigmatization, and potentially exposing their families to infection were prominent themes for HCWs during the crisis.

Experts fear that the battle against the COVID-19 pandemic will be prolonged and distressing. Therefore, we must keep our HCWs active, motivated, and healthy to ensure success. The same psychological distress faced by HCWs during the COVID-19 pandemic is expected to occur during future healthcare crises, and strategies need to be adopted to counter this psychological distress.[19] This study encourages the espousal of certain directives in future. Increasing knowledge about the prevention and management of the disease, and the development of more specific procedural and treatment protocols, alongside educational activities, will contribute to improved morale of HCWs dealing with the pandemic. Authorities and healthcare executives must develop and apply a preplanned in-house intervention program for the mental health of HCWs during such challenging times to ensure productivity and reduce mental health stigma in clinical workplaces. Moreover, productive, authentic messages and programs should be aired to console and advise the general public on how to avoid stress so that they can cope with this condition without affecting their mental health.

CONCLUSION

CISM significantly helped nurses sublimate their emotional reactions, control stress and help formulate a productive mindset for better managing the COVID-19 pandemic.

Conflict of Interest: None.

Author's Contribution

Following authors have made substantial contributions to the manuscript as under:

MT: Supervision, Conception, Study design, analysis and Interperitation of data, Critically reviewed manuscript & approval for the final version to be published.

AR: Co-supervision, Analysis and interpretation, manuscript writing & approval for the final version to be published.

IAS: Data entry, Drafted manuscript & approval for the final version to be published.

SBA & MUS & KIA: Data colllection, Entry of data, preparation of rough draft & approval for the final version to be published.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investi-gated and resolved.

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