

## IMPACT OF COVID-19 ON MENTAL HEALTH OF HEALTHCARE WORKERS DURING PANDEMIC; AN EXPERIENCE AT A TERTIARY CARDIAC CARE SET UP

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### ABSTRACT

**Objective:** To assess the frequency of mental health problems among healthcare workers related to COVID-19 pandemic among health care workers in a tertiary cardiac care center.

**Study Design:** Descriptive cross sectional study.

**Place and Duration of Study:** This study was conducted at Armed Forces Institute of Cardiology/ National Institute of Heart Diseases (AFIC/NIHD) Rawalpindi (Pakistan) from Apr 2020 to Jun 2020.

**Methodology:** This study was a hospital-based cross-sectional study consisted of 100 healthcare workers including 50 nurses and 50 doctors who volunteered to enroll in our study were included. Approval from the clinical research ethics committee of cardiac care hospital was received before the initiation of this study. Verbal informed consent was provided by all study participants prior to their enrollment. Exclusion criteria comprised of the healthcare workers who refused to participate in it. This study followed the COVID-19 Pandemic Mental Health Questionnaire (CoPaQ) 14. Descriptive statistics were used to describe the percentages and frequencies. Descriptive statistics were used to describe the percentages and frequencies were calculated and analyzed using the Statistical Package for the Social Sciences (SPSS), version 23.0.

**Results:** A total of 100 healthcare workers completed the survey. Mean age of the healthcare workers was  $36.5 \pm 27.0$  years (median=36.00), and 75 (75%) were women and men comprised 25 (25%). Of all participants, 50 (50.0%) were nurses, and 50 (50%) were doctors. A considerable proportion of participants reported symptoms of COVID-19, 6 (6.0%), tested positive 14 (14%), currently quarantine 24 (24.0%). While 12 healthcare workers experienced 14 day quarantine time period. 16 healthcare workers reported COVID test positive of their closed one. The fear of infecting others with COVID-19 was found to be 30 (30%). The mental stress that that COVID-19 will personally affect us was found in 28 (28%) of healthcare workers. The fear that consequences of the COVID-19 will be severe health disasters was found in 40 (40%) of the individuals.

**Conclusion:** In this study of physicians and nurses in hospitals with wards for patients with COVID-19, health care workers responding to the spread of COVID-19 reported high rates of symptoms of anxiety, fear, and distress.

**Keywords:** COVID-19, Healthcare workers, Quarantine.

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### INTRODUCTION

In December 2019, a new severe type of pneumonia, later known as novel coronavirus disease (COVID-19), was recounted in Wuhan, Hubei, China. Over the subsequent months, it rapidly prolonged around the world although not all countries have been likewise affected. By 24 May 2020, the World Health Organization (WHO) had been up-to-dated of 5,165,481 cases

of COVID-19, including 336,430 deaths<sup>1</sup>. Earlier research on other infectious diseases, including the Severe Acute Respiratory Syndrome (SARS), the Middle East respiratory syndrome (MERS) and the Ebola virus disease, steadily showed that many healthcare professionals (HPs) reported symptoms of anxiety and depression, both during and after the outbreak, causing a severe impact on their coping abilities, in some cases with long-lasting effects<sup>2,3</sup>. In many countries, especially in those that had not experienced recent epidemic outbursts, Health care workers have

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been opposed to unforeseen painful practices during the COVID-19 pandemic<sup>4,5</sup>.

Health care workers employed in the first line of care, with advanced clinical duties and those who have been infected have had higher prevalence of anxiety and depressive symptoms<sup>6-13</sup>.

Fronting these critical circumstances, health care workers on the front line who are directly involved in the treatment, diagnosis, and care of patients with COVID-19 are at risk of increasing psychological distress and other mental health symptoms. The ever-increasing number of confirmed and suspected cases, devastating workload, reduction of personal protection equipment, coverage of general media, deficiency of specific drugs, and outlooks of being imperfectly strengthened may all add to the mental burden of these health care workers. Previous studies have reported adverse psychological reactions to the 2003 SARS outbreak among health care workers<sup>14-17</sup>. Researches revealed that those health care workers feared contagion and infection of their family, friends, and colleagues, sense of ambiguity and stigmatization<sup>14,15</sup> described averseness to work or anticipating resignation, and stated undergoing high levels of stress, anxiety, and depression symptoms<sup>18</sup>, which could have resulted in long-term psychological associations. Similar apprehensions about the mental health, psychological adjustment, and recovery of health care workers treating and caring for patients with COVID-19 are now arising.

The aim of this study was to evaluate the current evidence based information about the impact of the COVID-19 pandemic on the mental health of health care workers in a tertiary cardiac care center.

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## METHODOLOGY

This study followed the COVID-19 Pandemic Mental Health Questionnaire (CoPaQ)<sup>19</sup>,

which is a newly developed and highly comprehensive self-report measure of personal and social consequences of the COVID-19-pandemic with an application scope world-wide. The questionnaire covers a wide range of areas of interest affected by the COVID-19 pandemic; that is, COVID-19 infection status, socio-demographic background, and the impact on risk perception, affect, thoughts, behavior, mental health, media usage, institutional trust and social cohesion. It took around 20 minutes to complete. Approval from the clinical research ethics committee of cardiac care hospital was received before the initiation of this study. Verbal informed consent was provided by all study participants prior to their enrollment. This study was a cross-sectional, hospital-based study consisting of 100 healthcare workers including 50 nurses and 50 doctors who volunteered to enroll in our study were included.

## RESULTS

A total of 100 healthcare workers completed the survey. Mean age of the healthcare workers was  $36.5 \pm 27$  years (median=36.00), and 75 (75%) were women and men comprised 25 (25%). Of all participants, 50 (50.0%) were nurses, and 50 (50%) were doctors.

A considerable proportion of participants reported symptoms of COVID-19 6 (6.0%), tested positive 14 (14%), currently quarantine 24 (24%). While 12 healthcare workers experienced 14 day quarantine time period<sup>16</sup>. Healthcare workers reported COVID test positive of their closed one. On the other hand, 36 reported death of their closed ones due to COVID-19. Risk factors for COVID were present in age greater than 60 years 10 (10%), CVD 6 (6%), Immunodeficiency 6 (6%). Nurses, women, frontline health care workers, and those working in critical care units reported more severe degrees of all measurements of mental health symptoms than other health care workers.

On the Likert scale of risk perception of COVID-19 pandemic questionnaire, 30.0% healthcare workers experienced that there are no means of control over the pandemic worried while 26

(26%) experienced that they will not infect themselves with COVID-19. Thirty (30%) showed their

recommended by 60 (60%). Only 34 (34%) agreed to donate blood in this pandemic.

**Table-I: Common fears regarding COVID-19.**

S. No.	Fear of Uncontrollable Pandemic	30 (30%)
1.	Fear of Infecting themselves	26 (26%)
2.	Fear of Infecting others	30 (30%)
3.	Fear of severe health disaster	40 (40%)
4.	Fear of loosing their loved ones	42 (42%)

**Table-II: Behavior of Health Care Workers Regarding Usefulness of Basic Hygienic Measures.**

S. No.	Social Distancing	80 (80%)
1.	Coughing or sneezing into crook of arm	70 (70%)
2.	Avoid touching face	74 (74%)
3.	Regular hand wash	84 (84%)
4.	Washing hands for 30 seconds	86 (86%)
5.	Disinfection of hands and objects	86 (86%)

**Table-III: Reduction of Social Contacts**

S. No.	Cancelling Private Meeting and Visits	74 (74%)
1.	Cancelling trips to other cities	70 (70%)
2.	Avoiding restaurants	78 (78%)
3.	Avoiding shaking hands	86 (86%)
4.	Making work from home	40 (40%)

fear that they will infect others with COVID-19. Twenty Eight (28%) of healthcare workers showed mental stress that that COVID-19 will personally affect us. Forty (40%) of the individuals had shown their fear that consequences of the COVID-19 will be severe health disasters. Fifty (50%) of the HC workers had shown that they will not die of COVID-19, while opposite statement was recorded by 8 (8%). Forty two (42%) of the individuals had fear that they will lose their loved ones due to COVID-19 as shown in table-I. Healthcare workers' behavior regarding basic hygienic measures is recorded and given in table-II.

Building up of stocks was also observed in healthcare workers during this pandemic. Thirty eight (38%) preferred to stock detergents, soaps and washing products. Only 34 (34%) individuals showed the interest of storing water and food products. Toilet paper storage was seen in 38 (38%). Stock up of cash was observed in only 36 (36%) healthcare workers. Regarding political measures like closure of educational institutions, borders, playgrounds, was strongly

## DISCUSSION

The COVID-19 has disputed many healthcare workers with unforeseen, life threatening experiences for which they had not been qualified. Although they are used to perceiving trauma and to regularly dealing with loss<sup>26</sup>, the high morbidity and mortality rates of this pandemic, the shortage in personal protective equipment, the fear of they or their family members becoming infected, the absence of an effective treatment /vaccine on the immediate limit and the new restraining public health policies initiated in most countries, have altered their normal scenario.

Therefore, during the pandemic, unpleasant emotions, including fear, hyper-arousal, intrusive memories and insomnia, as well as some related to sadness or emotional exhaustion were experienced by majority of them. The more they were exposed to unexpected life-threatening circumstances or uncertainty, the more mental distress they were expected to experience.

During the COVID-19 pandemic, many healthcare workers have been infected, requiring to be quarantined or even hospitalized. From pre-

vious experiences, we learnt that those quarantined have a tendency to sense more fearful, frustrated, deserted and isolated than non-healthcare workers<sup>21</sup>.

In fact, a big alarm is that health care workers may be unwilling to ask for help if needed. Self-treatment, denial, rationalization or minimization may be initial defense mechanisms used to challenge stressful circumstances but may result in not pursuing suitable help when developing a mental disorder. During the COVID-19 outbreak, this propensity might have transformed<sup>22</sup>. The social recognition health care workers are getting during this pandemic together with the mass and social media diffusion of their testimonies could help to worsen the internal psychological barriers to seeking professional support if necessary. Psychological assistance delivered to health care workers during the pandemic should be prolonged afterwards for cases at higher risk of evolving mental disorders<sup>23</sup>.

Longitudinal studies should help determine the long-lasting magnitudes of the acute distress among the health care workers facing this pandemic. Regardless of the importance of quantitative analysis, qualitative research may subsidize to draw a more accurate picture of individuals and socio-cultural narratives related to the pandemic and their influence on trauma response as we already know that providing a meaning to traumatic experiences and having social support connects with a lower presence of mental distress in the short and mid-to-long term.

## CONCLUSION

In this study of physicians and nurses in hospitals with wards for patients with COVID-19, health care workers responding to the spread of COVID-19 reported high rates of symptoms of anxiety, fear, and distress. Protecting health care workers is an important component of public health measures for addressing the COVID-19 epidemic.

## CONFLICT OF INTEREST

This study has no conflict of interest to be declared by any author.

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