

Impact of Corona Virus Disease in Health Care Professionals in Managing Patients with Positive Disease in Pakistan

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Author's Contribution

^{1,4} Conception of study

³ Experimentation/Study conduction

² Analysis/Interpretation/Discussion

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Article Processing

Received: 09/02/2021

Accepted: 21/08/2021

Cite this Article: Jesrani, A., Gul, P., Khan, N.A., Nayab, S., Awan, R.H., Gul, P. Impact of Corona Virus Disease in Health Care Professionals in Managing Patients with Positive Disease in Pakistan. *Journal of Rawalpindi Medical College*. 31 Aug. 2021; 25 COVID-19 Supplement-1, 21-24.
DOI: <https://doi.org/10.37939/jrmc.v25i1.1590>

Conflict of Interest: Nil

Funding Source: Nil

Access Online:



Abstract

Objective: The present was conducted to evaluate the psychological impact of COVID-19 infection in health care professionals while treating Corona Virus-positive patients.

Study and Design: Descriptive Observational Cross-Sectional study.

Methods and Materials: The Depression, Anxiety and Stress Scale - 21 Items (DASS-21) are a set of three self-report scales designed to measure the emotional states of depression, anxiety, and stress. The DASS-21 incorporated in a questionnaire form was distributed among the healthcare professionals that were involved in the direct management of COVID-19 patients. 224 consented HCPs participated in this cross-sectional study, during MAY 2020, nearing the end of the first wave of this pandemic in Pakistan.

Results: The results were broken down to scores assigned to:

Anxiety (overall mean score 19.01 ± 9.2), with 192 (85.7%) HCPs experiencing moderate to extremely severe anxiety;

Depression (overall mean score 18.12 ± 10), with 162 (72.3%) HCPs being moderate to extremely severely depressed;

Stress (overall mean score 20.12 ± 12.0), 202 (90.1%) HCPs reporting moderate to extreme stress levels.

Conclusions: Our study highlights the negative effect of this pandemic, despite the steadfastness to serve, on the psychological well-being of our healthcare professionals. As the coronavirus pandemic continues, the levels of, anxiety, stress, and depression are expected to increase among our major workforce and the main defense against the deadly virus. Hence the mental well-being of our doctors and paramedics should be scrutinized often and necessary measures should be taken at a national level to ensure the better functioning of our health care system.

Keywords: Corona Virus, Disease, Health Care Professionals, Pandemic, Pakistan.

Introduction

Death and disease affect the caregivers as much as the ones experiencing them. Throughout history, whenever a pandemic broke, it resulted in the robust participation of health care professionals in controlling its spread and treating the affected. Pandemics lasting for a long period of time or those pandemics which take millions of lives, not only increase the burden of physical work of healthcare professionals but also take a toll on their mental health.

COVID 19 has been no different. First reported in late 2019, Wuhan, China, spread far and wide like a wildfire with The World Health Organization (WHO) giving it a status of pandemic soon after it broke out.¹ Lockdown was enforced and all measures necessary were taken to contain the virus or at least limit its spread to the general public.²

Healthcare professionals are trained for action in situations like these but are the ones most exposed to the virus. With not much detail known about the virus or its treatment during the early phases of the pandemic, it would not be erroneous to state the health care professionals were unprepared and unprotected while carrying out their duties.⁴ This in addition to the long working hours³ with physically challenging personal protective equipment (PPE) also its limited provision and major resources on the verge of exhaustion in many setups were adding to the anxiety among the caregivers.⁴

The fear of contracting the disease themselves and infecting their families resulted in a social disconnection from families and friends.^{5,6} This subsequently resulted in the collapse of an emotional support system of health care professionals as individuals which would inevitably result in mental and psychiatric issues.⁴

Previously during the outbreak of severe acute respiratory syndrome (SARS), 18-57% of HCPs experienced psychiatric issues in 2003.⁷ Then in 2015, the Middle East respiratory syndrome (MERS) also resulted in feelings of dejection and despondence among the health care professionals.⁷

Many studies did previously report emotional instability, post-traumatic stress disorder, and mental illnesses among healthcare professionals taking the burnt of pandemics.^{8,9}

Our study gives an account of the effects on mental health, of the ongoing pandemic, among the healthcare professionals in Pakistan.

Materials and Methods

The study type was cross-sectional with a sample size of 224 HCPs, directly involved in the medical care of patients diagnosed with coronavirus disease, admitted in isolation wards and intensive care units at Bolan Medical Complex Hospital of Quetta, Pakistan, from 10th April 2020 to 20th July 2020,

A questionnaire form incorporating Depression Anxiety Stress Scale-21 (DASS-21), which is a self-evaluation tool is designed to assess three negative and regressive emotions affecting the mental state of a person namely, depression, stress, and anxiety.¹⁰

The questionnaire was in the English language with multiple choice questions, comprehensible by the participants, made available online due to national lockdown to limit the spread of the pandemic. This questionnaire also included reference to the possible reasons leading to the -development of depression, anxiety, and stress.

Data analysis was done using SPSS Version 21.0 (IBM Corp, Armonk, NJ). Mean and standard deviation (SD) were calculated for the scores of anxiety, stress, and depression. Percentages were computed to judge the impact reasons predisposing healthcare professionals to anxiety, stress, and depression in accordance with DASS-21.

Results

A total sample size of 224 HCPs, 128 (57.1%) was male, and 96 (42.9%) were female. Following results were concluded based on the Depression, Anxiety Stress scale (DASS-21):

Depression (overall mean score 18.12 ± 10), with 162 (72.3%) HCPs being moderate to extremely severely depressed;

Anxiety (overall mean score 19.01 ± 9.2), with 192 (85.7%) HCPs experiencing moderate to extremely severe anxiety;

Stress (overall mean score 20.12 ± 12.0), 202 (90.1%) HCPs reporting moderate to extreme stress levels.

(Table 1 and Figure 1).

Overall the level of stress, anxiety, and depression was slightly more among the male HCPs as compared to the female HCPs. According to this study, in the HCPs catering to the COVID-19 infected patients, the most common cause for stress and anxiety is a likely possibility of infecting their family (89.2%) and that of contracting the disease themselves (80.3%). Increased

workload and lack of security were similar among men (64.2%), lack of PPE (62.5%), lack of security

(62.5%), and lack of awareness among the general population about COVID-19 (46.4%). (Figure 2)

Table 1: Frequency of Anxiety, Depression, and Stress among Health Care Providers

DASS-21	Depression		Anxiety		Stress	
	Male (n=64)	Female (n=48)	Male (n=64)	Female (n=48)	Male (n=64)	Female (n=48)
Normal	12 (9.3%)	10 (10.4%)	0	10 (10.4%)	4 (3.1%)	4 (4.1%)
Mild	16 (12.5%)	24 (25%)	6 (4.6%)	16 (16.6%)	8 (6.2%)	6 (6.2%)
Moderate	32 (25%)	14 (14.5%)	30 (23.4%)	20 (20.8%)	32 (25%)	26 (27%)
Severe	50 (39%)	40 (41.6%)	64 (50%)	34 (35.4%)	58 (45.3%)	44 (45.8%)
Extremely Severe	18 (14%)	8 (8.3%)	28 (21.8%)	16 (16.6%)	26 (20.3%)	16 (16.6%)

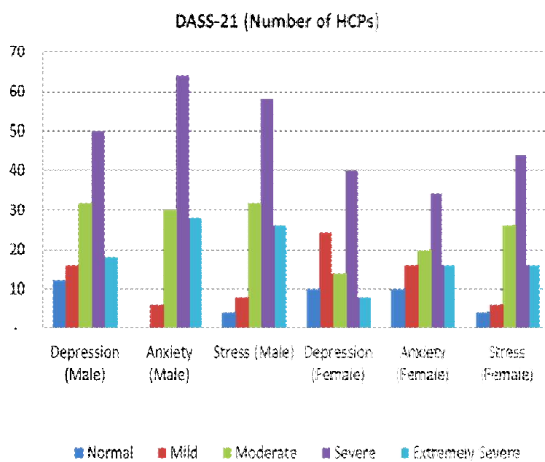


Figure 1: Frequency of DASS-21 in HCPs

Discussion

There is something very profound about how health care professionals respond to emotional stress. Knowing the dangers and possible outcomes of situations like these, dealing with the counts of positive cases and mortality, and knowing the ground realities do have a negative psychological impact on the mental health of the healthcare workers.^{11,12}

The study highlights three main effects of the pandemics on Pakistani health care workers in a tertiary care hospital. Negative emotions of stress, anxiety, and depression were studied, which are without a doubt only the tip of the iceberg, with many serious implications waiting to be unfolded with time, even long after the pandemic is gone.⁴

89% of HCPs were worried about infecting their families, while 80% were in fear of catching the disease themselves in our experience. These figures as compared to Wuhan are too high. Being the center of the outbreak and having the largest number of

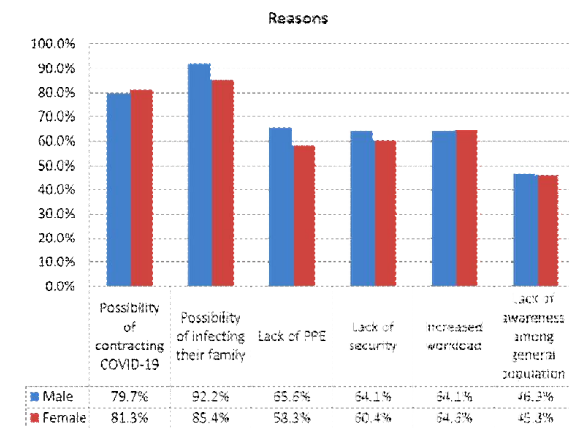


Figure 2: Causes of DASS-21 in HCPs

affected patients, only 50.4% of HCPs in Wuhan had depression, 44.6% had anxiety and 71.5% had distress.¹³

Lack of a proper health care system, exhausted resources, negligence of the public, and noncompliance to the safety guidelines by the public in the time of the pandemic, has greatly affected the mental health of already overburdened healthcare professionals caring for the diseased and ailing.⁸

Healthcare is a mentally and emotionally rewarding job; it adds value to the life of others and also of those providing that service. In crises like these, it also becomes challenging and emotionally draining. Appreciation and emotional support is as essential for healthcare professionals as the physical resources in these trying times and the media has done enough efforts to maintain those much-needed acts of encouragement and gratitude.¹⁴

By looking at the results of this study, necessary reforms can be made to better support the healthcare professionals in facing this challenging pandemic. Widening our resources, easy provision of personal

protective equipment, ensuring implementation of standard guidelines for limitation a possible repeat outbreak of virus among public, social and financial support of health care professionals working in the frontline. These measures may ease the stressors adversely affecting the mental health of health care professionals.

Conclusion

The study conducted revealed poor mental health of our healthcare professionals, which is alarming as for now our country has not yet flattened the curve of COVID-19, and the mental burnout of our healthcare professionals will only make our situation more vulnerable. Infrastructure should be built on a national level with the collaboration of healthcare agencies, that better understand the challenges that are faced by the doctors and paramedics, to help them maintain a better working environment, reducing the levels of stress, anxiety, and depression. Investments should be made in the provision of resources regarding problems of mental health for healthcare professionals so they can better serve in challenging situations like this.

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