Original Article

Anxiety Among Doctors and Paramedical Staff of Covid-19

Assessment of Anxiety Level Among Doctors and Paramedical Staff in a Tertiary Care Hospital, During COVID-19 Pandemic

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ABSTRACT

Objective: To assess the level of anxiety among doctors and paramedical staff working in a tertiary care Hospital during COVID-19-Pandemic.

Study Design: Cross-sectional study

Place and Duration of Study: This study was conducted at the Abwa Hospital & Research Centre attached with Abwa Medical College, Faisalabad for the period of three months i.e. May, 2020 to July, 2020.

Materials and Methods: Total 55 participants including 11 doctors & 44 paramedics serving specifically COVID-19 patients were selected to assess the level of anxiety and its associated factors.

Results: out of total 55 participants, the level of anxiety was higher among medical doctors (mean score =6.91±7.0) as compared to paramedical staff (mean score3.25±4.68) where 31.7% of frontline health workers reported anxiety on BAI. 20 % (n=11) mild symptoms, a single worker only reported moderate anxiety &7.2% reported severe anxiety.

Conclusion: During the pandemic of COVID-19 disease, among health care workers of ABWA hospital, medical doctors reported anxiety problems to a greater extent as compared to paramedical staff although intensity of anxiety was disproportionately higher in paramedical group. Considering this, there is a need of implementing programs of mental health being for health care professionals as an essential component of every epidemic at both national and international level.

Key Words: Anxiety level, Paramedical staff, Medical Doctors, COVID-19, Pandemic

Citation of article: Alam MM, Khokhar M, Iftikhar M, Hafeez S, Mahboob NH, Qasim AP. Assessment of Anxiety Level Among Doctors and Paramedical Staff in a Tertiary Care Hospital, During COVID-19 Pandemic. Med Forum 2020;31(10):106-110.

INTRODUCTION

The coronavirus (COVID-19) pandemic has not only emerged as a global medical emergency but is also adversely affecting the public mental health.by far it is considered the biggest outbreak of acute respiratory syndrome of the world including Pakistan.

Although similar to previous SARS outbreak, little is known about the psychological impact of (COVID-19) disease in active phase as well as long term on general public and frontline health care workers[1].

World Health Organization (WHO) declared COVID-19 a pandemic in March, 2020 due to its exceptionally high fatality rate and being more serious than SARS. An elevated level of stress has been faced by both the public and especially the health care professionals in past epidemics. Mass fear associated with COVID-19 disease also termed as corona phobia has shaken the roots of health care system universally which is cultivated majorly by the undue media coverage of minute to minute progression of disease globally. In addition to this, the socioeconomic decline posed a threat to the survival of daily wagers and business companies which further created a shadow of uncertainty of future, panic, despair and economic collapse [2,3]. Considering this, the mental health of medical and paramedical staff serving the frontline is of major concern and needs to be scientifically reported. Moreover, the factors promoting and maintaining the anxiety need to be determined on immediate priority so that deteriorating mental health of health professionals can be prevented[4]. Healthcare managers should be aware of the potential for the COVID-19 outbreak to elevate the risk of psychological distress and suicidal ideation in doctors[5]. The Healthcare professionals are

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Received: August, 2020
Accepted: September, 2020
Printed: October, 2020

prone to the stress in shape of physical as well as mental health issues & at times work related stress becomes a common associated factor for suicidal behavior [6]. The perceived risk of infection is warranted: a meta-analysis of the occupational risk from 2009 swine flu pandemic; reports that the odds of healthcare personnel contracting the virus were twice those of comparison groups. This heightened risk for doctors and nurses might be due to their greater exposure to the respiratory secretions of patients[7,8]. Threat of COVID-19 contagion, especially its impact among frontline paramedics treating patients of Corona Virus, and their perception of self-infection ultimately increases their agonistic behavior[9]. During a panic, Healthcare personnel (HCP) face not only physical challenges but also mental burdens, including psychological distress and fear [10,11]. Globally, healthcare organizations and governments are striving to protect HCP from COVID-19. Protocols for sterilization, safety, cleaning, and disinfecting in hospitals, isolation centers, and other health center spaces are being communicated and enforced [12,13]. An important point is to monitor psychological needs of HCP in times of pandemics, especially in relation to their anxiety level [14] and it should also be kept in mind that adapting with a new work environment in quarantined wards also leads to stress among healthcare personnel [15].

It is imperative to improve the support for healthcare providers during the corona pandemic. Immediate attention is needed to reduce anxiety, workload and family strain in frontline practitioners treating coronavirus patients, and to improve their perceptions of protection.

MATERIALS AND METHODS

It is a cross-sectional study in which face to face interviews are carried out with medical and paramedical workers of Abwa hospital, Khurrianwala to assess the presence and severity of anxiety. Along with the demographic information (age, gender, marital status, occupation, number of working hours spent per week), screening for anxiety is carried out with GAD-7 and then the severity of anxiety regarding COVID-19 is assessed with BAI (Beck anxiety inventory). Duration of study was three months i.e. 1st May, 2020 till 31st July, 2020. Participants included were doctors, nurses, dispensers, lab technicians, medical emergency and radiology technicians, ward boys & sanitary workers with a designated duty for the care provision to COVID-19 admitted patients for the last four months in hospital. Samples were collected through Probability (simple random) sampling technique. Ethical approval granted. After acquiring informed consent from each participant, the interviews carried out, and data collected.

Statistical Analysis: GAD-7 total score for the seven items ranges from 0 to 21. Scores of 5,10, and 15 represent cut-points for mild, moderate, and severe anxiety, respectively. Further evaluation is recommended when the score is 10 or greater. Beck Anxiety Inventory (BAI) is a self-reported (four-point scale) of 21 items used to assess the intensity of anxiety during the past week. Score ranged 0 to 63: mild anxiety (8–15), moderate anxiety (16–25) & severe anxiety (26–63). Descriptive single factor correlation and multiple regression analysis are used to explore the associated factors. Chi-square test was used to compare categorical variables whereas; univariate and multivariate logistic regression models were conducted for comparisons of age, gender and marital status.

RESULTS

Table No.1: Demographic characteristics of study participants

Characteristics	Frequency (%) N= 55
Age (Mean ± S.D)	28.33±8.18
Age in Years: 18-25 Years	28(50.9)
26-35 Years	18(32.7)
36-45 Tears	7(12.7)
46 Years or above	2(3.6)
Gender: Male	39(70.9)
Female	16(29.1)
Marital Status: Married	19(34.5)
Unmarried	36(65.5)
Profession Group: Medical Staff	11(20.0)
Paramedical Staff	44(80.0)
Occupation: Doctor	8(14.5)
Medical Specialist	3(5.5)
Nurse	12(21.8)
Midwife	2(3.6)
Ward boy	8(14.5)
Dispenser	4(7.3)
Lab Technician	10(18.2)
Radio Technologist	3(5.5)
Surgical Technician	1(1.8)
Sanitary Worker	4(7.3)
Working Hours Per Week	
26 hours	1(1.8)
36 hours	36(65.5)
48 hours	1(1.8)
60 hours	1(1.8)
72 hours	16(29.1)
Tested for Covid-19: Positive	4(7.3)
Negative	21(38.2)
No test	30(54.5)
Covid-19 Positive Family Member	
Yes	2(3.6)
No	53(96.4)

Descriptive Statistics, Values are expressed as frequency (%)

In this study the total number of participants were 55, out of which 20% (n=11) were medical doctors & 80%

(n=44) belonged to the paramedical profession. 70.1% (n=39) were of male whereas 29.1% (n=16) were of female gender. Mean age was 28.33_+8.18 years where 50.9% (n=28) aged 18-25 years, 32.7% (n=18) in 26-35 years, 12.7% (n=7) in 36-45 years & 3.6% (n=2) were above 46 y ears old. Majority of participants, 65.5% (n=36) were unmarried & 34.5% (n=19) were married. Most, 65.5 % (n=36), of the health care professionals worked 36 hours a week. Regarding covid -19 testing, 54.5% (n=30) didn't get tested, 21% (n=21) were negative & only 7.1% (n=4) were found positive for disease. Only 3.6% (n=2) had close family members diagnosed with covid 19 disease. There is a significant positive correlation between anxiety and health care profession during covid -19 pandemic. With a GAD-7 score of 6.91±7.0, medical doctors were comparatively experiencing higher level of stress as compared to paramedical staff. (P-value =0.042). Similar positive scores are found on other anxiety scale too. In addition to, in context of severity on BAI, 7.3 % (n=4) of medical doctors reported mild, none for moderate and 3.6% (n=2) for severe level of anxiety which in disproportionately lesser to that of paramedical staff where 7.3% for mild, 3.6%for moderate and 10.9% for severe anxiety.

Table No.2: Comparison of GAD-7 and BAI score between medical and paramedical staff

Variables	Medical Staff	Paramedical Staff	p-value	Mean differences (95% Confidence interval)
GAD-7 Score	6.91±7.00	3.25±4.68	0.042	3.66(0.143 to 7.175)
BAI Score	13.73±15.84	5.95±8.89	0.033	7.77(0.632 to 14.914)

Values are reported as Mean ± SD, Independent sample T-test: p value <0.05

Table No. 3: Assessment of Intensity of Anxiety through Beck Anxiety Inventory scale

Groups	Intensity of Anxiety				p-value
	Minimal	Mild	Moderate	Severe	
Medical Staff	5(9.1)	4(7.3)	0(0.0)	2(3.6)	0.074
Paramedical Staff	34(61.8)	4(7.3)	2(3.6)	6(10.9)	

Values are reported as frequency (%). Chi square Test: *p value <0.05

DISCUSSION

Corona Virus Disease (COVID-19) took the world by storm, emerged as a worldwide health care crisis, resulting in the pandemic of the 21st century [17]. The overwhelming burden of this dreadful disease has resulted in physical as well as psychological pressure on health care workers [18]. The present study identified significantly comparable differences in level of anxiety faced, between medical doctors and paramedical workers. A study conducted on physicians of China during COVID-19 pandemic showed that 12.5% had higher level of anxiety & direct contact to COVID-19 patients in hospital was observed to be an important risk factor associated with higher level of stress.[2]

Most of the study participants showed no/minimal anxiety but still a third of Frontline health workers were found having anxiety problems. Findings told that 31.9% (BAI) were suffering from anxiety disorder. Moreover as compared to the general population, frontline health care providers, despite provision of adequate safety measures still have a greater risk of infection as well to spread it to close ones especially family members. Such a threat causes a serious impact on psychological wellbeing where anxiety, PTSD, depression & burnout are commonly felt.[3]

A study conducted in Iran by Nemati et al [19], threw light on association of knowledge about Covid-19 and stress faced during patient handling where mean anxiety score was 6.02 +_2.6 & more than half of the nurses had satisfactory knowledge about disease causation and prevention provided to them with the help of WHO collaboration program and gained by themselves through electronic media. However, 21.8% of paramedical participants experienced anxiety while performing duties in Corona ward. It has been documented recently that financial crisis and increase workload might adversely affect the mental health of doctors where 6-20% of them develop anxiety, depression, somatization disorder and PTSD. Another study conducted in Karachi by Hasan et al [20] studying the levels of anxiety in 151 Healthcare professionals documented that 45.7% participants had mild anxiety, 14.6% had moderate, and 3.3% had severe symptoms of anxiety, whereas the remaining 36.4% had no anxiety. The early detection of psychosomatic problems needs skilled mental health professionals team as well as prompt strategies of their treatment and prevention in the initial stage of any epidemic & prevalent disease in future so that to render burnout and promote resilience. In this context, conducting awareness campaigns, teaching relaxation techniques, promoting physical fitness exercises along with good nutrition & sleep may serve as a booster of positive mental health.[21]

CONCLUSION

The wellbeing and mental health of HCP during global pandemics is absolutely salient as it could impact on mortality and recovery rates. Immediate attention is needed to reduce anxiety, workload, and family strain in frontline practitioners treating coronavirus patients, and to improve their perceptions of protection. Our

study confirmed great psychosocial impact in healthcare workers during COVID-19 pandemic including effects on their family and personal life hence this demands for a commensurate psychosocial support for healthcare workers at institutional as well as governmental level.

The wellbeing and safety of HCWs will determine the quality of preparedness for the next pandemic or the next wave of the corona pandemic. Collaborative efforts are needed by federal and provincial governments, the health sector, health regulatory bodies, media agents, and the public overall. Improving financial benefits, resources, workplace safety, protective services, and team building with emotional stability during these testing times will have long term benefits for Healthcare professionals in service quality and patient safety standards [22].

Author's Contribution:

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Conflict of Interest: The study has no conflict of interest to declare by any author.

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