

Psychological Distress among Healthcare and Non-Healthcare Workers during the COVID-19 Pandemic: This Too Shall Pass

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ABSTRACT

Objective: This study aimed to evaluate the psychological distress experienced by healthcare and non-healthcare professionals working in a hospital setting during the Coronavirus Disease 2019 (COVID-19) pandemic.

Methodology: This survey-based cross-sectional study included 361 psychological distress were similar in both genders and individuals of all age groups. Healthcare professionals were twice more likely to be severely depressed and stressed as compared to non-healthcare professionals ($p < 0.05$).

Results: There was a higher prevalence of anxiety, depression, and stress among healthcare professionals as compared to the non-healthcare professionals, as indicated by the mean depression, anxiety, and stress scores on DASS-21 ($p < 0.05$). The univariate logistic regression analysis showed that the odds of psychological distress were similar in both genders and individuals of all age groups. Healthcare professionals were twice more likely to be severely depressed and stressed as compared to non-healthcare professionals ($p < 0.05$).

Conclusion: This study concludes that psychological distress is more prevalent among healthcare workers than non-healthcare workers.

Keywords: Psychological Distress, COVID-19, Anxiety, Depression, Stress, Healthcare Workers, Non-Healthcare Workers.

INTRODUCTION

In late December 2019, the novel coronavirus outbreak took root in Wuhan, China, and spread rapidly throughout the world subsequently¹. As soon as the contagious potential of coronavirus was discovered, the World Health Organization (WHO) declared it a global health emergency². As of May 30, 2022, 3,279,734 confirmed COVID-19 cases have been reported, with over 8 million confirmed deaths³. In Pakistan, 1,572,598 confirmed COVID-19 cases and 33,616 COVID related deaths have been reported to date⁴. Given the urgency of the situation, the research and development communities are working tirelessly to address the devastating health crisis. Despite the fact that COVID-19 created a global socioeconomic crisis, real-time mass collaboration is evident⁵. We are now witnessing the coordinated efforts of scientific, industrial, technological, and global health-related organizations to emerge from this situation.

The COVID-19 outbreak has posed a serious threat to public health, affecting not only the physical but also the psychological wellbeing of public⁶. After the outbreak of COVID-19, a number of psychological issues, including depression, anxiety, and stress emerged or got unmasked. Not only has the Coronavirus caused patient suffering, but the psychological strains associated with it have had a significant impact on the front-line healthcare professionals⁷. Similarly, non-healthcare professionals have also been reported to suffer from depression, anxiety, and stress⁸.

It is worth noting that workers in healthcare facilities, whether doctors or non-doctors, are subjected to a variety of stressors that adversely affect their mental health and productivity⁹. To name a few, the exhausting workload in hospitals due to coronavirus, peer pressure, patients' and their families' unrealistic expectations, fear of illness and death, and the threat of malpractice litigation are major causes of mental health problems among these professionals¹⁰. Stress among health-care workers also affects their families, thereby affecting society as a whole.

The healthcare professionals are assumed to have better health than non-healthcare workers. However, it is indeed challenging to maintain a healthy lifestyle with the hectic schedules of healthcare professionals due to competing demands for their time, energy, and attention. At the same time, they are overwhelmed by the demands of their supervisors and their own families. Hence, it is critical to identify and address psychological issues among these professionals in order to improve pandemic outcomes.

The purpose of this study is to determine the prevalence of depression, anxiety, and stress among the healthcare and non-

healthcare professionals in Pakistan during the COVID-19 pandemic. Our goal is to break the stigma associated with mental health issues by raising public awareness that mental distress during a global pandemic is natural, and there is nothing wrong with seeking help to overcome these issues.

METHODS AND MATERIALS

An institutional web-based cross-sectional study was conducted during November 2020 at the Ziauddin University Hospital in Karachi, Pakistan. The study received clearance from the ethical review board of Ziauddin University. All the healthcare professionals and non-healthcare personnel from the non-clinical departments were invited to participate in the study. Considering the overall mental health impact due to COVID-19 to be 30%¹¹, the calculated sample size was 323 at 95% CI with a 5% margin of error.

A self-administered survey was used for data collection. In addition to demographics, depression, anxiety, and stress were assessed using a pre-designed questionnaire (DASS-21)¹². The collected data were statistically analyzed using SPSS version 22.0. All quantitative variables were presented as mean and standard deviation, while qualitative variables were given as frequency and percentages. To assess the difference in the psychological impact of COVID-19 between healthcare and non-healthcare professionals, the chi-square test and independent-sample T-test were used. Univariate logistic regression analysis was performed to evaluate the relationship between independent and dependent variables, where $p < 0.05$ was considered statistically significant.

RESULTS

Out of 361 enrolled subjects, 288 were healthcare and 73 were non-healthcare professionals. Most were females (50.13%), and the commonest age group was 20 to 35 years (56.78%). Sixty-one percent of participants reported contact with COVID-19 patients, majority of them were healthcare workers as compared to non-healthcare workers (70.8% vs. 24.7%, $p < 0.001$) (Table 1).

Participants' mean DASS-21 scores for depression, anxiety, and stress were 9.84 ± 9.12 , 9.07 ± 8.59 , and 13.14 ± 9.90 , respectively (Table 2). Notably, the mean depression, anxiety, and stress scores were comparatively higher among healthcare workers than the non-healthcare workers ($p < 0.05$).

Univariate logistic regression analyses revealed that male participants were less likely to have severe depression, anxiety, and stress as compared to female participants. Furthermore, for stress severity, older participants (> 50 years) were less stressed

as compared to the younger age group. Healthcare workers were three times more stressed than non-healthcare workers (Table 3).

Table 1: Baseline characteristics of the study population (N=361).

Variables	n(%)	
Age group	20 – 35 years	205(56.78)
	36 – 50 years	119(32.96)
	> 50 years	37(10.24)
Gender	Female	181(50.13)
	Male	180(49.86)
Education level	Intermediate or less	30(8.31)
	Graduate	133(36.84)
	Postgraduate	198(54.84)
Socioeconomic status	Low SES	14(3.87)
	Lower middle SES	90(24.93)
	Upper middle SES	229(63.43)
	Upper SES	28(7.75)
Contact with COVID-19 affected individuals	No	139(38.50)
	Yes	222(61.49)

Table 2: Prevalence of depression, anxiety, and stress among healthcare and non-healthcare professionals:

Variables	Healthcare worker (n=288)	Non-healthcare worker (n=73)	p-value	
Stress	Mean ± SD	14.10 ± 9.98	9.34 ± 8.62	< 0.001*
	Normal	167(58.0)	55(75.30)	0.02*
	Mild	38(13.20)	10(13.70)	
	Moderate	36(12.50)	2(2.70)	
	Severe	37(12.80)	6(8.20)	
Extremely severe	10(3.50)	-		
Depression	Mean ± SD	10.51 ± 9.40	7.21 ± 7.37	0.006*
	Normal	146(50.70)	47(64.40)	0.068
	Mild	48(16.70)	13(17.80)	
	Moderate	54(18.80)	8(11.0)	
	Severe	22(7.60)	5(6.80)	
Extremely severe	18(6.30)	-		
Anxiety	Mean ± SD	9.58 ± 8.87	7.07 ± 7.11	0.037*
	Normal	137(47.60)	45(61.60)	0.135
	Mild	31(10.80)	4(5.50)	
	Moderate	51(17.70)	14(19.20)	
	Severe	22(7.60)	4(5.50)	
Extremely severe	47(16.30)	6(8.20)		

Values are given as mean ± SD or n (%) *p < 0.05 is considered statistically significant.

Table 3: Factors associated with mental health of the studied population.

Variables		Depression		Anxiety		Stress	
		OR (95% CI)	p-value	OR (95% CI)	p-value	OR (95% CI)	p-value
Age group	20 – 35 years	Ref		Ref		Ref	
	36 – 50 years	0.89 (0.54 - 1.46)	0.666	1.23 (0.78 - 1.95)	0.358	0.93 (0.56 - 1.56)	0.804
	> 50 years	0.42 (0.16 - 1.04)	0.063	0.27 (0.11 - 0.69)	0.006*	0.32 (0.10 - 0.95)	0.040*
Gender	Female	Ref		Ref		Ref	
	Male	0.62 (0.39 - 0.98)	0.041*	0.65 (0.42 - 0.99)	0.046*	0.60 (0.37 - 0.98)	0.043*
Education level	Intermediate or less	Ref		Ref		Ref	
	Graduate	0.89 (0.38 - 2.07)	0.789	0.47 (0.21 - 1.06)	0.069	0.70 (0.29 - 1.70)	0.443
	Post graduate	0.76 (0.33 - 1.74)	0.531	0.48 (0.22 - 1.05)	0.069	0.81 (0.34 - 1.88)	0.623
Social status	Low	Ref		Ref		Ref	
	Lower middle	0.48 (0.14 - 1.60)	0.235	0.60 (0.19 - 1.88)	0.387	0.54 (0.15 - 1.94)	0.346
	Upper middle	0.89 (0.29 - 2.76)	0.846	0.67 (0.22 - 1.97)	0.470	1.01 (0.30 - 3.34)	0.984
	Upper	0.49 (0.11 - 2.02)	0.325	0.75 (0.20 - 2.71)	0.661	0.54 (0.12 - 2.46)	0.429
Caregiver of a COVID-19 patient	No	Ref		Ref		Ref	
	Yes	1.17 (0.73 - 1.87)	0.504	1.20 (0.78 - 1.86)	0.398	1.21 (0.73 - 1.98)	0.449
Occupation	NHW	Ref		Ref		Ref	
	HW	2.20 (1.15 - 4.21)	0.017*	1.47 (0.86 - 2.54)	0.156	3.29 (1.51 - 7.15)	0.003*

*p < 0.05 is considered statistically significant.

DISCUSSION

The goal of this study was to determine the severity of depression, anxiety, and stress among Pakistani healthcare and non-healthcare workers. Depression, anxiety, and stress were found to be more prevalent among healthcare workers than among non-healthcare workers, which is consistent with previous studies evaluating mental health issues among healthcare professionals¹²⁻¹⁵. Yahaya et al. reported that the healthcare professionals were psychologically distressed even during routine practice prior to COVID-19¹⁶. A local study on Pakistani nurses reported high level of psychological distress and burnout among nurses during the COVID-19 pandemic¹⁷. The situation deteriorated during the pandemic when healthcare professionals faced a significantly increased workload as a result of the pandemic's rapid spread, resulting in negative mental health consequences.

Two Egyptian studies found a high prevalence of depression, anxiety, and stress (70% - 90%) among healthcare workers^{18,19}. Although several studies assessed the trauma and mental issues experienced by the healthcare workers during the outbreak, to the best of our knowledge, this is the first study from Pakistan assessing the psychological impact of COVID-19 among healthcare professionals in comparison to non-healthcare

professionals. We discovered that healthcare workers scored higher on DASS-21 depression, anxiety, and stress scales than non-healthcare workers (p<0.05). Similarly, Lenzo et al. observed that healthcare workers assisting COVID-19 patients scored significantly higher on all three DASS-21 scales than second-line healthcare workers¹². Akhtar et al. assessed moral injury and psychological resilience among healthcare professionals related to COVID-19 pandemic²⁰. They reported that 69.44% healthcare workers experienced high level of moral injury during COVID-19. The correlation between moral injury and work hours was positive significant, while with resilience and experience the correlation was negative significant.

We discovered that older age and male gender had no effect on the likelihood of having psychological distress while observing the factors associated with it. However, occupation played a significant role, as healthcare workers were more likely to suffer from mental health issues during the COVID-19 pandemic. According to a Chinese study, age, occupation, and perception of the outbreak all contribute significantly to differences in psychological distress among different individuals²¹. Because they are constantly exposed to COVID-19 patients, healthcare workers are clearly at a higher risk of mental health problems than their

non-healthcare counterparts²². We discovered that the enrolled healthcare workers were three times more likely to be stressed and twice as likely to be severely depressed as non-healthcare professionals ($p < 0.05$).

Further literature review revealed that patients having low monthly income experienced higher levels of anxiety²³. According to a study from Qatar, being single and having poor health were significant predictors of psychological distress and fear experienced by hospital staff in relation to the COVID-19 pandemic²⁴. Similarly, a local study from Karachi reported that healthcare workers, young individuals, females and those with lower socioeconomic status were more likely to experience psychological distress during this pandemic²⁵. On the contrary, our data did not reveal any significant association between social status and prevalence of anxiety, stress and depression.

Although this is the first study from Pakistan to compare psychological problems among healthcare and non-healthcare workers during the COVID-19 pandemic, some limitations need to be addressed. This was an online survey with a single-center population, which limits the generalizability of the results. Individuals who did not have access to technology or smartphones were unable to participate. Second, there was unequal distribution between the two occupational groups, with a different ratio of healthcare to non-healthcare workers. Finally, the data was based on self-assessment, which may have influenced the findings due to the desirability biases of enrolled subjects.

CONCLUSION

COVID-19 has resulted in a myriad of psychological problems in both healthcare and non-healthcare workers. The current study discovered that healthcare workers have a higher prevalence of anxiety, stress and depression than non-healthcare professionals. Though frontline healthcare workers are more likely to develop these mental health issues, non-healthcare workers within the healthcare facilities must not be overlooked. Understanding the need for mental health services and promoting educational programs and campaigns are critical, especially in a stigmatized country like Pakistan. Hospital administrations should develop and implement effective psychological support systems. Similarly, proactive emotional support from colleagues not only alleviates suffering but can also help in the identification of any major psychological distress that may necessitate referral to a specialist.

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