Research Article

Anxiety and Wellbeing Among Healthcare Workers During COVID-19 Pandemic

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ABSTRACT

Covid-19 pandemic has impacted the lives of everyone in one way or another. The healthcare workers being the group directly or indirectly working with the covid patients are at higher risk which can lead to increased anxiety among them. This is a prospective, cross-sectional, observational study among healthcare workers who were involved with patient care during the initial stages of the pandemic. Generalized Anxiety Disorder Assessment scale (GAD-7 scale) and WHO-5 wellbeing scale were distributed among healthcare workers through an online survey as a google form. Out of 95 participants who consented about 80% were frontline workers among which the majority (82%) were doctors and nursing staff (11.6%). The mean GAD-7 score observed was 6.06 ± 5.12 with a majority of the participants having minimal anxiety (44.44%). The mean WHO-5 wellbeing score was 55.83 ± 26.57. The present study showed a majority of the health care worker has minimal anxiety but the low mood was prevalent in many which could be due to increased workload and stress.

Keywords: Covid-19, GAD-7 score, WHO-5 wellbeing score, Anxiety, Low mood, Health care workers.

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INTRODUCTION

The word pandemic means an epidemic that has spread globally or over a wide area of a region or a country.[1] With today's technology resulting in faster international travels, any contagious vector can quickly spread all over the globe. One such example is the current pandemic by COVID 19 virus which has disrupted lives all over the globe.[2] Stemming its origin in Wuhan, China, it has quickly engulfed all the countries and has brought even the most advanced health care system to its knees.[3,4] Being a novel disease, the fear of the unknown and uncertainty has gripped the whole world into its vicious clutches. The signs and symptoms of this disease are evolving day by day with inflammation playing a crucial role in organ damage making it more difficult to treat.[5,6] In view of no approved therapies, prevention strategies, repurposed drugs, multivitamins, minerals, and traditional medicines were being tried to treat this condition.[7–15] Vaccination against COVID-19 seems to be the only effective strategy to combat this pandemic and hence emergency approval of these vaccines was done by various regulatory authorities around the world without conducting conventional long-term follow-up clinical trials because of the prevailing emergency situation.[16–18] Approval on the basis of short-term trials fails to recognize rare adverse events associated with any therapy, hence pharmacovigilance strategies need to be planned to monitor and report various adverse events associated with these agents to facilitate rational drug use.[16–21]

The economic and social burden of this disease has been enormous. Loss of jobs, the closing of workplaces due to lockdown, reduced productivity, stigmatization of the positive patient and his/her family, loneliness, anxiety are some of the common factors contributing to the burden of the disease along with the health aspect.[2,22,23] The greatest impact has been felt by the front-line workers such as doctors, nurses, hospital staff, who are in direct contact with the patient and have also disrupted the professional teaching and training programs.[24,25] The psychological assault from this unprecedented situation can result in a feeling of worthlessness, guilt over not being able to do more for patients, overwhelming work pressure, deprivation of contact with family while being in quarantine, burnouts, depression, anxiety over infection, and outcomes, uncertainty for the future, Post-traumatic stress disorder (PTSD).[23] Other challenges which can further deteriorate the working environment currently faced by the healthcare workers (HCWs) are confusion caused by often and frequent changes in recommendations and protocols, use of unfamiliar equipment such as PPEs, fear of spreading the disease to family members, caring for colleagues infected while on

duty.[26] Such stressful situations and their consequences such as burnout, depression, anxiety can deteriorate the emotional wellbeing of the health care provider which can result in decreased work efficiency, more medical errors, and compromised care of the patient.[27–29]

A WHO-5 wellbeing scale is a tool containing a positively phrased questionnaire that measures the subjective general psychological wellbeing of an individual.[30] It consists of 5 items which are rated in a Likert scale fashion, with '0' corresponding to 'none of the time' and 5 representing 'all the time'. Because of the current atmosphere of fear and exhaustive work schedule, the psychological status of the healthcare workers needs to be stronger than ever. The WHO-5 scale seems to be a viable option to assess the current psychological situation of these individuals.

HCWs are working tirelessly in a high-pressure environment as there was a huge spike of cases and that can lead to anxiety in them. GAD-7 (General Anxiety Disorder-7) scale is an established tool for screening and measuring anxiety in an individual.[31] A score of more than 10 warrants further assessment when used as a screening tool.[32] It is a 7-item based questionnaire that can also measure the severity of anxiety. The scores of 5, 10, and 15 refer to mild, moderate, and severe anxiety.[32] Hence this study was planned to assess the anxiety and wellbeing of the HCWs who are currently acting as the first-line defense against the pandemic.

METHODS

This is a prospective cross-sectional, observational study conducted on the healthcare workers working in the period of the COVID-19 pandemic. The study was conducted using a questionnaire tool that had two parts. The first part consisted of sociodemographic parameters and the second part has a questionnaire related to anxiety and wellbeing. To assess the anxiety, the Generalized Anxiety Disorder scale (GAD-7) scale was used which is one of the most validated tools used for anxiety and was developed by Robert L. et al.[33] It is readily accessible from www.phqscreeners.com free of cost.[34,35] To assess the severity of anxiety, the total score was calculated for each individual and classified according to the aggregate score as follows: score 0 to 4= minimal anxiety, 5 to 9= mild anxiety, 10-14=moderate anxiety, 15-21= severe anxiety.[36] To assess wellbeing in the participants, the WHO-(5) well-being questionnaire was used.[37–39] The questionnaire link was distributed through online platforms like emails, messaging applications like WhatsApp, etc. by preparing a google document questionnaire forms and sent to various healthcare workers (doctors, nurses, pharmacists, medical and nursing students/interns, laboratory technicians, etc. and whosoever is taking care of COVID-19 patients). The online study tool was developed in such a manner that the participant who agreed to participate and gave online consent was instructed to answer the questionnaire and those deferring consent submitted the form without any further query. The collection of the data was through an electronic platform. To maintain the anonymity and confidentiality of the participants, the names and identification of the participants were not collected. The institutional ethics committee approved the study before its commencement. The data were entered into Microsoft Excel and were analyzed by using descriptive statistics. The data are presented as frequency and percentages.

RESULTS

Of 105 participants in the study, a total of 95 gave consent to participate and 9 denied it and 1 was excluded because she was not an HCW. Of 95 HCWs, about 80% were frontline workers among which the majority (82%) were doctors followed by nurses (11.6%). The majority of the HCWs were working in medical colleges (52.7%) and hospitals (39.8%). About 30.5% of them had a work experience of 2-4 years and 22% had an experience of 1-2 years [Table 1].

Table 1: Sociodemographic details of the healthcare workers

Sociodemographic Parameters		Frequency
Frontline Workers	Yes	75
	No	20
Workplace	Government setup	71
	Private setup	24
Profession	Doctor	78
	Nurse	11
	Laboratory Technician	1
	Emergency Technician	2
	Pharmacist	2
	PhD student	1
Place of Work in Health Sector	Hospital	37
	Medical College	32
	Nursing College	14
	Laboratory	13
Job Experience	Less than 1 year	7
	1-2 years	21
	2-4 years	29
	5-7 years	16
	7-10 years	13
	More than 10 years	9
Current Stay	Family	36
	Alone	32
	Colleagues	14
	Friends	13

Of 95 HCWs, a total of 90 HCWs completely filled the GAD-7 scale of anxiety, and five were incomplete, hence excluded. The mean score of the HCWs, when assessed by the GAD-7 scale, was 6.06 (SD = 5.12) [Table 2]. The majority of the HCWs (44.44%) had minimal anxiety, 26.6% had mild anxiety, 23.3% had moderate anxiety and a very few HCPs (5%) had severe anxiety [Figure 1].

Table 2: Generalized Anxiety Disorder 7-item (GAD-7) scale

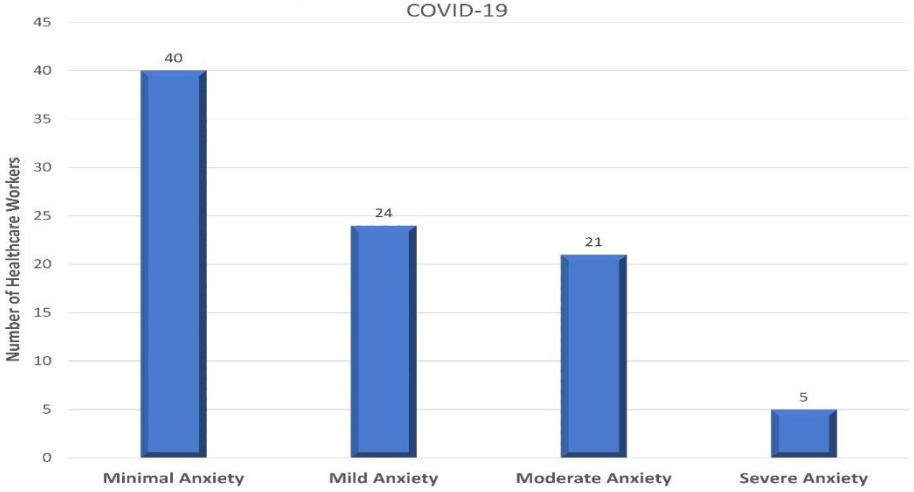
Over the last two weeks, how often have you been bothered by the following problems?	Not at all, N(%)	Several Days, N(%)	More than half the days, N(%)	Nearly every day, N(%)
1. Feeling nervous, anxious, or on edge(N=90)	34(37.7%)	39(43.3%)	13(14.4%)	4(4.4%)
2. Not being able to stop or control worrying(N=90)	40(44.4%)	31(34.4%)	14(15.5%)	5(5.5%)
3. Worrying too much about different things(N=90)	37(41.1%)	35(38.8%)	13(14.4%)	5(5.5%)
4. Trouble relaxing(N=90)	35(38.8%)	36(40%)	12(13.3%)	7(7.7%)
5. Being so restless that it is hard to sit still(N=90)	47(52.2%)	23(25.5%)	16(17.7%)	4(4.4%)
6. Becoming easily annoyed or irritable(N=90)	30(33.3%)	36(40%)	18(20%)	6(6.6%)
7. Feeling afraid, as if something awful might happen(N=90)	35(38.8%)	34(37.7%)	16(17.7%)	5(5.5%)

On the assessment of the WHO-5 Well-Being Index, it was observed that the mean score was 55.83+/- 26.57 (SD). A total of 42(44.68%) HCWs had scored below 50 and were supposed to have low mood and 21(22.34%) scored 28 or below 28 and could have depression, however, it warrants further assessment for proper diagnosis. About 72.3% of the HCWs felt 'cheerful and in good spirits', about 70% each felt 'calm and relaxed', 'felt active and vigorous' and 'woke up feeling fresh and rested' respectively and about 66% of the HCWs reported that their daily life has been filled with things that interested them 'all of the time, most of the time or more than half of the time [Table 3].

Table 3: WHO-5 Well-Being Index assessment of Healthcare Workers during COVID-19 pandemic

WHO-5 Well-Being Index items	All of the time, N(%)	Most of the time, N(%)	More than half of the time, N(%)	Less than half of the time, N(%)	Some of the time, N(%)	At no time, N(%)
I have felt cheerful and in good spirits (N=94)	21(22.3%)	21(22.3%)	26(27.6%)	17(18.1%)	5(5.3%)	4(4.2%)
I have felt calm and relaxed (N=94)	21(22.3%)	18(19.1%)	27(28.7%)	17(18.1%)	9(9.6%)	2(2.1%)
I have felt active and vigorous (N=94)	15(15.6%)	23(24.5%)	28(28.7%)	15(29.8%)	12(12.7%)	1(1%)
I woke up feeling fresh and rested (N=94)	20(21.2%)	18(19.1%)	28(29.7%)	19(20.2%)	6(6.4%)	3(3.2%)
My daily life has been filled with things that interest me (N=94)	13(13.8%)	20(21.27%)	29(19.1%)	19(20.2%)	6(6.4%)	7(7.4%)

Figure 1: Severity of Anxiety among Healthcare workers amidst COVID-19



DISCUSSION

The psychological effect of this pandemic situation is an important factor that needs to be taken into account while planning for health management as healthcare professionals are facing a lot of stress due to the unpredictability of the situation. In our study, the mean GAD score was 6.06 which is similar to the result found in a study done by Badahdah et al (6.41).[40] Another study showed a mean of 4.08 for the GAD score among health professionals.[41] In this study majority of the health care workers showed minimal anxiety (44.4%) followed by mild and moderate anxiety which is supported by Matilla et al (55%) and Lai et al.[41,42] Majority of the HCWs had two to four years of experience which can account for less anxiety as with experience, a health crisis can be easily handled.[43]

The mean score for the WHO- 5 wellbeing score was 55.83 +/- 26.5. Another study done in Oman reported a mean score of 52.47+/- 22.94.[40] According to Hesselink et al, there was a drop in WHO-5 wellbeing score during the first wave of covid 19 (59.8+/- 18.6), score not returning to a baseline of the pre-covid era even after the wave.[44] Our study also demonstrated mean well-being score was nearing the threshold of 50 which is indicative of low mood which may or may not amount to depression.

As time passes, the more we discover about the disease, there may be fall in anxiety levels which has been demonstrated by longitudinal psychological research done in previous epidemics.[45] The knowledge and attitude regarding the disease have been found to be satisfactory in the study conducted previously.[46] Good knowledge, attitude, and proper infection control practices can help curb the spread of the disease leading to a decrease in the number of COVID cases. This would minimize the workload on the HCWs and in turn, would lead to a lesser burden, exertion, and better quality of life.

Limitations

This study was planned and conducted in the initial phase of the COVID-19 pandemic and no follow-up was done to see whether there was any change in the anxiety levels or wellbeing among them. Secondly, due to the small sample size of the study, it is difficult to conclude any findings hence large-scale studies having adequate sample size and follow-up needs to be undertaken.

CONCLUSION

COVID-19 due to its immense potential to spread had led to a surge in the number of cases which leading to tremendous increased workload on the healthcare workers and an increase in anxiety. The present study shows the majority of them had minimal anxiety but had a low mood. Although large follow-up observational studies need to be conducted in this context to confirm the findings.

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