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Psychological Issues Faced by the Healthcare Workers during the COVID-19 Pandemic

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ABSTRACT

Aim: The current study aimed to evaluate the psychological issues, including the prevalence of anxiety and depression among healthcare workers (HCWs) working in a tertiary care center.

Materials and methods: This was a cross-sectional online survey in which the survey link was sent to employees of the institute, either through personal messages or using various WhatsApp groups. The survey questionnaire assessed depression, anxiety, and other psychological issues among the HCWs.

Results: The study included 88 participants with a mean age of 32.8 (SD: 9.5) years. A majority of participants were male (54.5%) and were married (53.8%). 29.5% had been quarantined or had to stay in self-isolation for doing duties in COVID-19 area. The anxiety disorder and depressive disorder were present in 15.9 and 13.6%, respectively. All the participants with depressive disorders also had an anxiety disorder. About one-fifth to half of the participants reported “mostly or always” experiencing the feelings of loneliness, social disconnectedness, feeling of being used, running away from work, scared of contacting infection, scared of not getting support from the administration, scared of not getting personal protective equipments (PPEs), feeling angry because of lack of adequate safety equipment, tense of getting infected with COVID-19, and tense of unknowingly spreading the infection. However, one-fifth to half of the participants reported “mostly or always” experiencing the feelings of being optimistic and feeling proud of self.

Conclusion: Every seventh HCWs found to be suffering from diagnosable mental disorders. A significant proportion of HCWs are also experiencing a multitude of negative emotions. These findings suggest that there is a need to develop mental health support for all HCWs, and also there is a need to address the concern of HCWs.

Keywords: Anxiety, Depression, Healthcare workers.

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INTRODUCTION

COVID-19 pandemic has emerged as a major threat to humanity. The COVID-19 virus has infected 13,616,593 people with 585,727 confirmed deaths till July 17, 2020, worldwide.¹ The figures of those infected and those dying due to COVID-19 infection are rising exponentially and the situation is almost like a world war. Healthcare workers (HCWs) and related staff are the most vulnerable to get infected and are under tremendous physical and psychological distress.

Managing patients with COVID-19 require different ways to deal with the medical needs, for which the majority of the HCWs are not trained. Some of the necessary changes include the use of personal protective equipments (PPEs) and staying away from family, friends, or relatives. They also have to work with new and frequently changing protocols, caring for patients, and even for colleagues who have fallen sick. Other factors which have been reported to be associated with an increased level of anxiety or stress include working for more extended hours, living away from home,² fear of infecting the family or relatives, family and relatives getting infected with COVID-19, availability of PPEs,³⁴ feeling of uncertainty and stigmatization,⁵,⁶ and poor social support.⁷,⁸ All these have contributed to increased workload; besides, the fear of themselves getting infected with the virus.⁹ It is reported that doctors and nurses are more susceptible as compared to other health staff.¹⁰

A few studies have evaluated the psychological issues in HCWs, and available data from different countries suggest the prevalence of anxiety to ranging from 10.5 to 44.6%¹¹−¹⁹ and that for depression to range from 8.9 to 50.4%.¹¹−¹³,¹⁵ In general, it is suggested that, compared to the general populations, HCWs are at a higher risk and have a higher prevalence of anxiety and depressive disorders.¹⁶ In terms of factors associated with psychiatric morbidity, female HCWs have been found to have a higher prevalence of depression and anxiety disorder when compared to males.¹¹,¹²,¹⁵,¹⁶ Among the different HCWs, nurses have been found to have a higher prevalence of depression and anxiety disorder, when compared to doctors.¹¹,¹²,¹⁴−¹⁶

There are only three studies from India, which evaluated the psychological morbidity among the HCWs and reported the anxiety disorders from 36.1 to 39.5% and depressive disorders from 9.1 to 34.9%.²⁰−²² In this background, the current study aimed to evaluate the psychological morbidity among the HCWs from a tertiary care center in North India.

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Materials and Methods

This was a web-based cross-sectional study conducted from the period between April 9, 2020 and May 27, 2020. An online survey questionnaire was circulated through WhatsApp. The survey link was sent to employees of the institute, either through personal messages or using various WhatsApp groups. The link was designed in such a way that a person could respond only once using a particular device. The survey questions were both in English and Hindi. The Institute ethic committee approved the study. The opening statement of the survey mentioned that participation in the survey implied providing consent for the study. The persons receiving the survey were at liberty not to respond to the survey.

The survey questionnaires included:

Patient Health Questionnaire-9 (PHQ-9)\(^\text{23}\)

The PHQ-9 is the self-administered depression module, in which each of the 9 DSM-IV criteria as “0” (not at all) to “3” (nearly every day) are evaluated. It has excellent reliability and validity, sensitivity and specificity of 88% for major depression.

Generalized Anxiety Disorder-7 (GAD-7) Scale\(^\text{24}\)

It is a 7-item anxiety scale with good reliability as well as the criterion, construct, factorial, and procedural validity. Cut-off points of 5, 10, and 15 are interpreted as representing mild, moderate, and severe levels of anxiety on the GAD-7. Higher scores on GAD-7 are strongly associated with multiple domains of functional impairment. Although GAD and depression symptoms frequently co-occurred, factor analysis shows that these are distinct dimensions. Moreover, GAD and depression symptoms have differing but independent effects on functional impairment and disability. There is a good agreement between self-report and interviewer-administered versions of the scale.

Additionally, a self-designed questionnaire to evaluate the effect of quarantine on stress, anxiety, and feeling of scared and reaction of a family toward the person were included.

Descriptive statistics were applied, and the data collected were analyzed using SPSS 20.0 version. Pearson’s correlation coefficient and Spearman’s correlation coefficient were used to finding the association between different variables.

Results

The study included 88 participants. The mean age of the participants was 32.8 (SD: 9.5) years. Slightly more than half of the participants were male (54.5%) and married (53.8%). Slightly more than one-fourth (29.5%) of the participants had been quarantined or had to stay in self-isolation for doing duties in COVID-19 area (Table 1).

Prevalence of Anxiety and Depression

The overall prevalence of psychiatric disorder was 15.9%. The anxiety disorder and depressive disorder were present in 15.9 and 13.6%, respectively. All the participants with depressive disorders also had an anxiety disorder (Table 2).

Feeling and Emotions Due to COVID-19 Infection

On the self-designed questionnaire, the participants were asked to express their emotional state in the previous 2 weeks and rate it on 4 points (not at all, sometimes, mostly, and always). About one-fifth to half of the participants reported “mostly or always” experiencing the feelings of loneliness, social disconnectedness, feeling of being...
used, running away from work, optimistic, scared of contacting infection, scared of not getting support from the administration, feeling proud of self, scared of not getting PPEs, feeling angry because of lack of adequate safety equipment, tense of getting infected with COVID-19, and tense of unknowingly spreading the infection (Table 3).

In terms availability of the protective gears, only about one-third of the participants were satisfied (slightly or extremely) with the availability of PPEs, N-95 masks, provision of testing, and provisions of quarantine. About half or more of the participants were satisfied (slightly or extremely) with the availability of mask other than N-95, sanitizers, cleaning of the area, and food (Table 4).

### Family Reaction Toward the Person Under Quarantine
About half of the participants reported that their family was “mostly or always” worried about them getting ill and about one-third of the participants reported that their family was “mostly or always” worried about them getting the infection home (Table 5).

When asked about how much they were scared of infecting their family members, 29.5% participants reported themselves to be “very scared” and another 22.7% reported themselves to be “somewhat scared”, 29.5% reported “a bit scared”, and only 18.2%...
Table 4: Availability and provision of PPEs, food, and testing

| Variables                      | Extremely dissatisfied | Slightly dissatisfied | Neither satisfied nor dissatisfied | Slightly satisfied | Extremely satisfied |
|--------------------------------|------------------------|-----------------------|-----------------------------------|-------------------|--------------------|
| Availability of sanitizers     | 19 (21.6)              | 15 (17.0)             | 11 (12.5)                         | 23 (26.1)         | 20 (22.7)          |
| Availability of masks (N-95)   | 32 (36.4)              | 13 (14.8)             | 13 (14.8)                         | 11 (12.5)         | 19 (21.6)          |
| Availability of masks other than N-95 | 10 (11.4)       | 19 (21.6)             | 11 (12.5)                         | 30 (34.1)         | 18 (20.5)          |
| Availability of PPEs           | 32 (36.4)              | 13 (14.8)             | 10 (11.4)                         | 14 (15.9)         | 19 (21.6)          |
| Cleaning of the area           | 8 (9.1)                | 15 (17.0)             | 20 (22.7)                         | 28 (31.8)         | 17 (19.3)          |
| Transport                      | 17 (19.3)              | 10 (11.4)             | 26 (29.5)                         | 17 (19.3)         | 18 (20.5)          |
| Food                           | 12 (13.6)              | 12 (13.6)             | 17 (19.3)                         | 24 (27.3)         | 23 (26.1)          |
| Provision of testing           | 29 (33.0)              | 8 (9.1)               | 18 (20.5)                         | 20 (22.7)         | 13 (14.8)          |
| Provision of quarantine, in case if you are suspected/infected with COVID-19 | 20 (22.7) | 18 (20.5) | 17 (19.3) | 16 (18.2) | 17 (19.3) |

Table 5: Reaction of family toward the person under quarantine

| Variables                                      | Not at all (%) | Sometimes (%) | Mostly (%) | Always (%) |
|------------------------------------------------|----------------|---------------|------------|------------|
| My family is happy for me being on duty        | 24 (27.3)      | 32 (36.4)     | 19 (21.6)  | 13 (14.8)  |
| My family is worried about me getting ill      | 13 (14.8)      | 29 (33.0)     | 33 (37.5)  | 13 (14.8)  |
| My family is worried about me getting the infection home after being discharge from quarantine | 22 (25.0) | 37 (42.0) | 20 (22.7) | 9 (10.2) |

Table 6: Relationship between anxiety, distress, sadness, and mental well-being

| Variables                          | Total GAD score r (p value) | Total PHQ-9 score r (p value) | Age (in years) r (p value) |
|------------------------------------|-------------------------------|-------------------------------|---------------------------|
| Total GAD-7 score                  | XXX                          | 0.725 (<0.001)**              | −0.142 (0.188)           |
| Total PHQ-9 score                  | 0.725 (<0.001)**             | XXX                          | −0.219 (0.04)*           |

*p < 0.05; ***p < 0.001

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reported that they were “not at all scared” of infecting their family members. The total score of GAD-7 and PHQ-9 had a positive correlation with each other. Age had a negative correlation with GAD-7 (Table 6).

There was no significant difference noted among male and female in terms of the prevalence of depression and anxiety. Those who were not quarantined or had undergone self-isolation scored significantly high on the GAD-7 and PHQ-9 as compared to those who were quarantined or had undergone self-isolation after controlling the age, gender, and marital status.

**Discussion**

This cross-sectional study involved the 88 HCWs from a tertiary care center suggest a prevalence of depression to be 13.6% and GAD to be 15.9%, with all participants with depression also fulfilling the criteria for GAD. The overall prevalence of depression seen in the present study is within the reported prevalence range of 8.9–50.4% of depressive disorders in the existing literature.11–13,15,20–22,25

The variation among the prevalence rate of depressive disorder in these studies is because of the use of the different scales for the assessment of the depression, different settings, sampling technique, cultural influences, time of assessment (in relation to the number of cases with COVID-19 infection) in a particular area. When we compare the prevalence of depressive disorder of the present study with those studies which used the PHQ-9 with a cut-off score of 10, findings of the present study are similar to the previous studies which have reported prevalence of 9.1–13.4%.10–22

In terms of anxiety disorders, the prevalence of anxiety disorder in the present study was 15.9%, which is in the reported range of 10.5–44.6%.11–22 The studies which have used GAD-7 have reported prevalence of 24.1–37.3%.12,13,18–22 The differences can be due to use of different cut-off scores, performed in different settings, with different countries vary in their medical systems, medical speciality, type of staff of the hospital, PPEs, cultures, labor and employment conditions, the policies of lockdown, the ease of working from home and maintaining a living in a pandemic, and the information in both mainstream and social media, infection of the colleagues, number of cases, etc.

These findings suggest that there is a need to provide psychological support to the HCWs who are playing an important role in managing patients infected with COVID-19 and providing care to patients with other ailments, who can be potentially infected with COVID-19 infected. Additionally, they should be provided with adequate PPEs and other protective measures to fight the pandemic.

In addition to syndromal depression and anxiety, a significant proportion of the participants reported a whole experiencing range of negative emotions “mostly or always”, in the form of loneliness, social disconnectedness, feeling of being used, running away from work, scared of contacting infection, scared of not getting support from the administration, feeling angry because of lack of adequate
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safety equipment, tense of getting infected with COVID-19, tense of unknowingly spreading the infection, and scared of not getting PPEs. These findings suggest that there is an urgent need for providing psychological support, fulfill the logistic needs like providing them with adequate PPEs and other safety instruments, rationalize their working hours, proper rotation of duty between high-risk and low-risk areas, providing them living facilities to be comfortable about not infecting their own family members. However, a significant proportion of participants also reported feeling optimistic and feeling proud of self. These features reflect the dedication and possibly the personality traits and adaptive coping when faced with the stress.

This study is limited by small sample size, cross-sectional study design, and use of self-administered questionnaires. Furthermore, the study was limited to a single tertiary care center. The other confounding factors like a family history of mental illness, history or mental or physical illness among the participants, working area, etc., were not taken in to account.

To conclude, this study shows that about one-seventh of the HCWs suffer from diagnosable mental disorders. However, a significant proportion of them are also experiencing a multitude of negative emotions. These findings suggest that there is a need to develop mental health support for all HCWs. This should involve regular screening for mental morbidity, providing them an opportunity for addressing the psychological crisis, and providing psychological support on a regular basis. In addition, there is also a need to address the concern of HCWs of non-availability of PPEs and provide adequate insurance coverage.

ETHICAL APPROVAL

The research was approved by the Institute’s Ethics Committee at Postgraduate Institute of Medical Education and Research, Chandigarh, India. All procedures performed in this study were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

INFORMED CONSENT

Informed written consent was obtained from all individual participants included in the study.

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