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Burnout among nurses during the Covid-19 second wave

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Abstract

Background: The health and wellbeing of nurses are important considerations for workforce retention and quality care. We investigated the prevalence of burnout among Indian Nurses during the Covid-19 second wave.

Materials and Methods: We conducted a cross sectional online survey between April 28th, 2021, to May 21st, 2021. The questionnaire was created using Google Form. The questionnaire was based on Copenhagen burnout inventory (CBI). Burnout was assessed in personal, work, and client-related (COVID-19 pandemic second wave related) domains. This was sent to the contacts of all the investigators, using the WhatsApp Messenger and E-mail. A total of 516 Nurses participated.

Results: The prevalence of personal burnout was 51.98% which was the highest among the 3 domains, work-related burn-out was 49.19% and Covid-19 second wave related burnout was 45.54%. The prevalence of burnout was significantly higher among the age group 41-50. It was observed that burnout scores are significantly high in female participants. Regarding area of working Participants working in General ward recorded a higher burnout scores in both domains. In Personal burnout both staff nurse and in charge professional had a higher burnout scores compared to Head Nurse/CNO.

Conclusion: Nurses, one among the health care workers as frontline warriors, face great challenges during this pandemic, because of the nature of their work. There is a significant prevalence of burnout during the COVID-19 second wave among Nurses. Further research is needed to support the personal well-being of Nurses and minimize workplace burnout by developing short- and long-term strategies.

Keywords: burn out, Covid-19 pandemic, CBI, MBI, second wave, nurses

Introduction

"The COVID-19 pandemic has reminded all of us of the vital role health workers play to relieve suffering and save lives," said Dr Tedros Adhanom Ghebreyesus, WHO Director-General. "No country, hospital or clinic can keep its patients safe unless it keeps its health workers safe [1].

Healthcare workers in both the acute and community settings have played a key role in responding to the global COVID-19 pandemic. As person-to-person transmission was confirmed, healthcare workers were faced with increased risk of exposure to SARS-CoV-2 and put under considerable psychological stress with the risk of developing adverse mental health outcomes [2].

During the COVID-19 pandemic, healthcare staff have been exposed to increased workload, working in unfamiliar areas, returning to clinical practice from non-frontline roles, pervasive media coverage and concerns about access to appropriate personal protective equipment (PPE), layered on top of concerns for the health of family and friends—all factors which could contribute to mental stress. As the well-being of health professionals is likely to influence the care they deliver, caring for staff may also indirectly impact patient outcomes [3].

Burnout is characterized by excessive work demands causing stress (exhaustion), a detached attitude toward work and colleagues (depersonalization) and reduced feelings of efficiency and attainment (professional efficacy). These feelings may be exacerbated during a pandemic due to the unknown nature of the disease, working with a high volume of infected patients and personal risk of contracting the virus. Burnout also has consequences for patients and colleagues due to higher risk of making poor decisions; possible hostile attitude toward patients; medical errors and difficult relationships with co-workers [4].

We aim to provide a 'snapshot' of the levels of burnout among Nurses during the Second wave of COVID-19 pandemic. While on one hand people across India and around the globe are largely confined to their homes with businesses and educational institutions all shut down to contain the virus, and on the other hand doctors, health-care workers, and medical staff members are leading the battle against COVID-19 from the front. Putting their own lives at risk with selfless determination for the sake of saving lives, they truly are our heroes in these challenging times. While they are putting their own health, families, and most importantly their own lives at risk, the least we can do is

appreciate their efforts and cooperate by staying safe indoors. It is good to see tributes pouring in for all the medical heroes working in scrubs.

Maslach and Jackson first described Maslach Burnout Inventory (MBI) in 1981. The MBI defines burnout based on three facets, presence of emotional exhaustion, depersonalization, and lack of personal fulfilment. Kristensen questioned the reliability of MBI, with many arguments and to overcome the drawbacks of MBI, introduced the Copenhagen Burnout Inventory (CBI) [5].

The burden of COVID-19 on health systems and health-care workers was substantial in low-income and middle-income countries (LMICs), where difficult daily triage decisions had to be made in the context of grave shortages of basic equipment and consumables. As India has been one of the main countries affected badly during the second wave of Covid pandemic. In this regard, we aimed to study the prevalence of burnout among nurses working in India during the COVID-19 pandemic using a modified CBI burnout scale.

Materials and Methods

This cross-sectional study involved a survey of Nurses working in various regions during the COVID-19 second wave. This study was conducted between April 28th, 2021, to May 21st, 2021. We sent an introductory note along with the questionnaire, which explained the intent of the survey, and an assurance that strict anonymity and confidentiality of data will be maintained. All Nurses who filled in the questionnaire and matched our inclusion criteria were included in the sample. The inclusion criteria were: i) Nurses working in hospitals during the COVID-19 second wave and ii) working in India. No exclusion criteria were applied.

The questionnaire was created using Google Form. Participation in the study was optional and anonymous. We carried out a cross-sectional, online survey to evaluate the prevalence of burnout during the COVID-19 second wave. The questionnaire was based on Copenhagen burnout inventory (CBI). The questionnaire was prepared using Google form that had 21 questions in total. This was sent to the contacts of all the investigators, using the WhatsApp Messenger and E-mail. Each device was allowed to fill in the questionnaire once only to ensure accuracy of the data. Request to participate was sent twice at an interval of one week.

The questionnaire had 6 general questions and specific questions in 3 domains of burnout. General questions were about job profile, age, gender, and working environment. The first domain, based on personal burnout (i.e., without a specific attribution), had five items. The second domain (perceived to be related to person's work), based on the work-related burnout, had five items. The third domain was based on client-related burnout (perceived as related to the persons' work with client, i.e., COVID-19 second wave) had 11 items.

All items had five response categories each: five response categories in Likert scale (for intensity). Each scale ranged from 0 to 100 points, with higher the score suggesting higher level of burnout. We averaged the scores as the total score and defined burnout as CBI score >50.

Results

Data were obtained from Google sheets and analysed using IBM SPSS® Statistics version 23. Variables measured on nominal scale were summarized using proportions (%). Mean scores (mean ± SD) in personal, work-related, and client-related (pandemic related) domains were calculated using the 0- to 100-point scale. Respondents with a mean score of >50 were classified as experiencing burnout. We received responses from 516 Nurses. 't' test was performed to compare the burnout domains.

Table 1: Demographic profile (n = 516)

Variable	Frequency (%)
Age	
21-30 Years	280 (54.3%)
31- 40 Years	172 (33.3%)
41-50 Years	56 (10.9%)
51-60 Years	08 (1.6%)
Gender	
Female	452 (87.6%)
Male	64 (12.4%)
Marital Status	
Married	260 (50.39%)
Single	256 (49.61%)
Job profile	
Staff Nurse	404 (78.29%)
In charge	72 (13.95%)
Head Nurse	20 (3.88%)
CNO/NS	20 (3.88%)
Area of Working	
Private Practice	32 (6.20%)
General Wards	176 (34.11%)
Emergency	44 (8.53%)
LR / OR	68 (13.18%)
ICU's	196 (37.98%)

Table 2: Prevalence of Burnout scores (n = 516)

Domain	Mean ± SD
Personal	51.98 ± 22.64
Work Related	49.19 ± 24.08
Covid-19 second wave related burnout	45.54 ± 15.43

The prevalence of personal burnout was 51.98% which was the highest among the 3 domains, work-related burn-out was 49.19% and Covid-19 second wave related burnout was 45.54%.

Table 3: Comparison of Burnout Domains among the age groups (n = 516)

Age	Personal	Work related	Pandemic related
21-30 years (n=280)	52.29 ± 22.66	47.86 ± 25.15	44.68 ± 14.92
31- 40 years (n= 172)	50.70 ± 22.72	51.86 ± 23.19	47.09 ± 15.62
41- 50 years (n=56)	57.86 ± 20.95	50.71 ± 19.24	47.24 ± 15.12

51-60 (n=8)	27.50 ± 13.36	27.50 ± 24.05	30.68 ± 23.08
p value	0.003	0.021	0.013

It was observed that the difference in personal, work related, and pandemic related burnout scores are significantly different among the age groups (p values are 0.003, 0.021 and 0.013 respectively). Participants in age group 51-60 recorded a significantly lower burnout scores in each of the three domains. However, the number of participants in the age group 51-60 was less.

Table 4: Comparison of Burnout Domains with marital status (*n* = 516)

Marital Status	Personal	Work related	Pandemic related
Married (n=260)	50.46 ± 24.05	50.15 ± 22.20	45.45 ± 16.27
Single (n=256)	53.52 ± 21.06	48.20 ± 25.86	45.63 ± 14.57
p value	0.126	0.359	0.896

It was found that none of the domain scores were related with marital status. In other words, marital status of the participant is not influencing the burnout scores.

Table 5: Comparison of Burnout Domains between gender (*n* = 516)

Gender	Personal	Work related	Pandemic related
Female (n=452)	53.89 ± 21.10	50.58 ±23.65	46.02 ± 15.18
Male (n=64)	38.44 ± 28.16	39.38 ± 25.00	42.19 ± 16.87
p value	<0.001	<0.001	0.063

It was observed that both Personal and work-related burnout scores are significantly less in male participants (p values <0.001 in both). Pandemic related burnout scores also found lesser in Males, but it was not statistically significant (p value is 0.063 which is more than 0.05)

Table 6: Comparison of Burnout Domains and Job profile (*n* = 516)

Job profile	Personal	Work related	Pandemic related
Staff Nurse (n=404)	53.17 ± 21.57	49.90 ± 23.66	46.02 ± 14.96
In charge (n=72)	54.17 ± 28.44	57.78 ± 20.71	49.87 ± 15.42
Head Nurse (n=20)	36.00 ± 12.31	27.00 ± 24.84	27.27 ± 7.07
CNO/NS (n=20)	36.00 ± 16.35	26.00 ± 15.69	38.64 ± 17.13
p value	<0.001	<0.001	<0.001

In Personal burnout both staff nurse and in charge professional had a higher burnout scores compared to Head Nurse/ CNO. (P values CNO vs in charge 0.007, CNO vs staff nurse 0.004, Head Nurse Vs In charge 0.007, Head Nurse Vs Staff Nurse 0.004).

In Work related burnout also CNO and Head Nurse professional had a low burnout scores compared to Staff nurse/ in charge. (All pair wise comparison p values are <0.001). While comparing work related burnout score of in charges with staff nurse it was found that in charges are having a higher burnout (p value 0.039).

In pandemic related domain, in charge professionals have more burnout scores compared to CNO (p value 0.016) and Head Nurse (<0.001). Staff nurses are having a higher burnout scores compared to Head nurses (*p* value <0.001).

Table 7: Comparison of Burnout Domains and Area of working

Area of working	Personal	Work related	Pandemic related
General Ward (n=176)	55.91 ± 19.55	53.52 ± 20.66	45.97 ± 12.16
ICU'S (n=196)	49.90 ± 26.92	48.06 ± 28.19	44.71 ± 18.33
Emergency (n=44)	54.09 ± 21.97	48.18 ± 24.23	46.69 ± 17.24
LR / OR (n=68)	52.65 ± 14.97	45.88 ± 21.18	43.32 ± 14.17
Private Practice (n=32)	38.75 ± 18.62	40.63 ± 14.91	51.42 ± 10.39
p value	0.001	0.021	0.135

Participants working in General ward recorded a higher burnout scores followed by those working in Emergency ward and LR/OR. Participants of Private practice section had significantly lower burn out score compared to General ward (0.001), Emergency (0.027) and LR/ OR (0.031). Work related burnout scores were significantly higher in those working in General ward compared to private practitioners (p value 0.041). Pandemic related burnout scores not found significantly different regarding area of working (p value 0.035).

Discussion

We found that as compared to normal circumstances, there was a significant increase in work related burnout. We therefore chose to base our questionnaire on the CBI, with appropriate modification, as it has been shown to be a simple, comprehensive, reliable, self-explanatory, reliable, easy-to-understand. It includes items, with mixture of positive and negative phrases, covering physical and cognitive aspects of exhaustion and is free to use. We found it more appropriate for the current pandemic scenario as it comprises three independent domains reflecting different aspects of Nurses activities.

The mean (±SD) scores of the personal, work-related, and pandemic-related burnout domains of the questionnaire were 51.98 (±22.64), 49.19 (± 24.08) and 45.54 (± 15.43) respectively which shows work related have more burn out. Participants in age group 41-50 recorded a significantly higher burnout scores in each of the three domains. It was observed that burnout scores are significantly high in female participants. In Personal burnout both staff nurse and in charge professional had a higher burnout scores compared to Head Nurse/CNO. In Work related burnout also CNO/Head Nurse professional had a low burnout scores compared to Staff nurse/ in charge. (All pair wise comparison p values are <0.001). While comparing work related burnout score of in charges with staff nurse it was found that in charges are having a higher burnout (p value 0.039). In pandemic related domain, in charge professionals have more burnout scores compared to CNO (p value 0.016) and Head Nurse (<0.001). Staff nurses are having a higher burnout scores compared to Head nurses (p value <0.001).

Regarding area of working Participants working in General ward recorded a higher burnout scores in both domains. But Pandemic related burnout scores not found significantly different with regard to area of working (p value 0.035).

An Australian study of 1037 midwives found that, Respondents were predominantly female (98%), with an average age of 46.43 years, and 16.51 years of practice. Using a CBI subscale cut-off score of 50 and above (moderate and higher), 64.9% (n = 643) reported personal burnout; 43.8% (n = 428) reported work-related burnout; and 10.4% (n = 102) reported client-related burnout. All burnout subscales were significantly correlated with depression, anxiety and stress, particularly personal and work-related burnout with Spearman's rho correlations ranging from 0.51 to 0.63 ($p < .001$). Around 20% of midwives reported moderate/ severe/ extreme levels of depression (17.3%); anxiety (20.4%), and stress (22.1%) symptoms. Mann-Whitney U tests revealed significant differences between groups with depression (r = .43), anxiety (r = .41) and stress (r = 48) having a medium size effect on burnout.[6]

Our findings need to be considered in light of possible limitations. First, being an anonymous survey, a possibility of lack of uniformity, variability of responses, and regional bias cannot be ruled out. Another limitation of our study was that most participants in our survey were working in the high-risk areas. This is most probably due to the fact that all the investigators themselves work in high-risk areas, and therefore their contacts, which were sent the questionnaire, are likely to be working in similar areas of their hospitals. We also did not ask the respondents whether any of them had past psychiatric issues, but the presence of such issues may influence the results of such studies. The Nurses were all working in different environments, which might have differences and the effect of this cannot be appreciated. Lastly, self-reporting bias, depending upon the interest level and mindset of the respondent, cannot be ruled out. Follow-up studies are required to assess and analyze the long-term impact of this pandemic if the situation worsens further.

Conclusion

In conclusion, during disasters, humans face many challenges that create a significant amount of stress. The COVID-19 pandemic has been a tough experience for people all over the world; no similar event has happened in recent decades. Nurses, as frontline workers, faced more challenges during this pandemic because of the nature of their work. It is obvious from this study that the workload of Nurses has increased during the pandemic. Psychological well-being is crucial for them to keep performing in their work, especially during disasters when the demands on them are higher. This study showed that burnout and stress are major issues for Nurses. These factors should be addressed by stakeholders to mitigate their effect on nursing staffs when preparing for or dealing with such pandemics. Further research is needed to support the personal well-being of Nurses and minimize workplace burnout by developing short- and long-term strategies.

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