VOLUME - 10, ISSUE - 09, SEPTEMBER - 2021 • PRINT ISSN No. 2277 - 8160 • DOI : 10.36106/gjra

Original Research Paper

Psychiatry

BURNOUT DURING COVID-19 PANDEMIC AMONG HEALTH CARE WORKERS OF A TERTIARY CARE CENTRE IN NORTHERN INDIA: A CROSS SECTIONAL STUDY.

Dr. Vikesh Gupta	Senior Resident, Department of Psychiatry, Dr. Rajendra Prasad Government Medical College, Kangra, Himachal Pradesh,India.
Dr. Sukhjit Singh	Professor, Department of Psychiatry, Dr. Rajendra Prasad Government Medical College, Kangra, Himachal Pradesh,India.
Dr. Vineet Kumar	Senior Resident, Department of Community Medicine, Indira Gandhi Medical College, Shimla-1, Himachal Pradesh, India.
Dr. Pankaj Kanwar*	Assistant Professor, Department of Psychiatry, Dr. Rajendra Prasad Government Medical College, Kangra, Himachal Pradesh,India. *Corresponding Author

ABSTRACT **Background:** COVID-19 pandemic is a novel viral illness due to which an uncertainty has developed among the general public as well as the health care workers (HCWs) **regarding the future of mankind.** This has resulted in burnout among the HCWs which has been reported by researchers from different parts of the world. **Method:** A cross sectional study was done among health care workers (faculty members, residents, nurses and interns) working in different specialties of a tertiary care health centre of Northern India. A self-designed performa containing sociodemographic details along with "Burnout Self-Test" scale was used to obtain the prevalence of burnout among HCWs. **Result:** Among 192 participants, the signs of burnout were found in 148 participants (77.1%) and most had mild burnout 90 (46.88). **Conclusion:** Burnout amongst health care workers is high particularly in unmarried and female HCWs.

KEYWORDS : Burnout, stress, COVID-19, health care workers, corona virus.

INTRODUCTION

Burnout is defined as a state of physical, emotional and mental exhaustion that results from long-term involvement in work situations that are emotionally demanding (Maslach, 1976). It is a multidimensional syndrome comprising of emotional exhaustion, depersonalization and reduced sense of personal accomplishment (Maslach, 1981). The 'Burnout' was defined as a state of tiredness, exhaustion and failure in the institutional social workers (Freudenberger, 1974). Burnout, apart from being personally harmful, can lead to suboptimal patient care (Shanafelt, 2015).

Stress has been regarded as an occupational hazard since the mid-1950s. Occupational stress has been cited as a significant health problem (Caplan 1980). Work stress in hospital nursing staff was first assessed in 1960 in which four sources of anxiety were identified) namely: patient care, decision making, taking responsibility and change (Menzies 1960).

Many viral out breaks such as severe acute respiratory syndrome (SARS), the Middle East respiratory syndrome (MERS), Ebola virus, Swine flu(H1N1), etc had resulted in acute or post-traumatic stress and psychological distress in health care workers (HCWs) (Kisely, 2020). Some cases of "pneumonia of unknown cause" were first detected in Wuhan, China, in December 2019, which has been identified as coronavirus-related pneumonia with continuously increasing cases all over the world (Li, 2020 & Munster, 2020). Burnout is increasingly being recognized globally as a major concern, affecting physical and mental well-being of HCWs. During the current COVID-19 pandemic, closing down of international and state borders, strict city, and area wise lockdown has affected HCWs and their families, causing excessive negative psychological effects (**Khasne, 2020**).

In first survey on HCWs in India regarding burnout during COVID-19 pandemic, high level of pandemic related burnout was found. They also found that female responders had more chances to suffer from work related and personal burnout (Khasne, 2020). A study from China among HCWs during COVID-19, showed increased prevalence of psychological problems and also higher risk to develop them (Zhang, 2020). A cross sectional study to investigate burnout among HCWs in Japan was conducted in April 2020, which reported 31.4% prevalence of burnout among HCWs (Matsuo, 2019**). Another study by Nishimura, 2021 in Japan found 27.3% of physicians and 23.8% nurses were experiencing burnout. Fifty** percent of HCWs who were engaged in the care of COVID-19 patients reported burnout.

COVID-19 pandemic is a novel viral illness due to which an uncertainty has developed among the general public as well as the health care professionals. Health care workers being on fore front for managing COVID-19 patients and also providing general health care services, may be facing new challenges at workplace daily which may exacerbate stress. Also, health professionals are at increased risk of getting infected with Covid-19 virus. In view of all these factors, this study was planned to assess burn out among health professionals of a tertiary care health institute of Northern India which is providing health services to COVID-19 patients.

MATERIAL AND METHODS

We carried out a cross-sectional study to evaluate the prevalence of burnout during the COVID-19 pandemic between September 2020 to November 2020. Approval from institutional ethics committee for this study was obtained and we ensured the confidentiality of the study participants during the data collection. A performa containing sociodemographic details such as age, gender qualification, religion, family pattern, psychoactive substance use and frequency of use in last 3 months was designed. "Burnout Self-Test" scale was used to obtain the prevalence in HCWs. We included all health care workers (faculty members, residents, nurses and interns) working in different specialties of the institute in this study. However, HCWs who did not give valid consent were excluded from the study. We distributed the self-designed performa and "burnout self-test" while following COVID-19 appropriate behaviour and responses were collected by investigators after an interval of 1 week.

STATISTICAL ANALYSIS

Data was collected and entered in Microsoft excel spread

sheet, cleaned for errors and analysed using Epi Info software version 7.2.2. Descriptive statistics were used to summarize the demographic data. Frequencies, percentages and their 95% confidence intervals were used to describe categorical variables. For continuous variables means and standard deviations were calculated. Pearson Chi-square and Fischer Exact test was used for univariate association analysis between exposure and outcome. A two-sided p value of < 0.05 was considered as statistically significant.

RESULTS

We found that 192 HCWs participated in this study and submitted their responses. Eighty participants (41.67%) were in the age group of 25-35 years and 47 (24.48%) were less than 25 years. More than half 106(55.21%) participants were female. Most of the participants (no.=179) were Hindu who hailed from rural background 121(63.02%), were not married 104 (54.17%) and lived in nuclear family 147 (76.56%). Most of the participant in this study were graduates 63 (32.81%) or were qualified in nursing care 43(22.40%). Sixty (31.25%) junior residents actively participated in the study and were followed by nurses 44(22.92%) and interns 42(21.88%). Majority participants 167(86.98%) had not used any psychoactive substance in last 3 months. The signs of burnout were found in 148 participants (77.1%) and most had mild burnout 90 (46.88).

Univariate Analysis

Among age group less than 45 years and more than 45 years majority of participants 125(79.11%) and 23(77.08%) respectively had burnout. In this study we obtained that female participant 82(77.08%) had slightly more burnout than male participants 66(76.74%). Locality and family pattern also did not had any significant difference in the burnout. In this study we found that 90(74.38%) participants from rural background and 77.08% participants from urban background had burnout. Also, 112(74.38%) participants from nuclear families had burnout. We didn't find significant difference in burnout amongst never married participants 68(78.16%) and married 80 (76.19%) participants. Twenty (80%) participants who were using psychoactive substance in last 3 months had burnout in comparison to 128(76.65%) participants who were not using psychoactive substance. One hundred thirty seven (76.54%) Hindu religion followers had burn out in comparison to the others 11(84.62%). We observed statistically insignificant higher burnout among unmarried, female, younger participants (<45 years) from urban locality, belonging to nuclear families and using psychoactive substance.

Table-1 Sociodemographic Profile of the Participants

Variable	Burnout		Odd ratio	p-Value
	Not Present Frequency (%)	Present Frequency (%)		
Age <45 >45	33(20.89%) 11(22.92%)	125(79.11%) 23(77.08%)	0.552	0.149
Gender Male Female	20(23.26%) 24(22.92%)	66(76.74%) 82(77.08%)	1.04	0.920
Locality Rural Urban	31(25.62%) 13(22.92%)	90(74.38%) 58(77.08%)	1.54	0.245
Family Pattern Nuclear Joint	35(23.81%) 9(22.92%)	112(76.19%) 36(77.08%)	1.25	0.595
Marital status Never Married Married	19(21.84%) 25(22.92%)	68(78.16%) 80(76.19%)	0.894	0.746
Psychoactive substance use No Yes	39(23.35%) 5(20.00%)	128(76.65%) 20(80.00%)	1.22	0.710
Religion Hindu Others	42(23.46%) 2(22.92%)	137(76.54%) 11(84.62%)	1.69	0.503

Table 2: Burnout among participants

Variable	Frequency	Percentage (%)
Age Group		
<25	47	24.48
25-35	80	41.67
35-45	31	16.15
45-55	23	11.98
55-65	11	5.72
Sex		
Male	86	44.79
Female	106	55.21
Locality		
Rural	121	63.02
Urban	71	36.98
Marital status		
Single	87	45.31
Married	104	54.17
Separated	1	0.52
Religion		
Hindu	179	93.23
Others	13	6.77
Family pattern		
Nuclear	147	76.56
Joint	45	23.44
Qualification		
Nursing	43	22.40
UG/Intern	42	21.88
Graduation	63	32.81
Post-graduation	34	17.71
Higher	10	5.21
Psychoactive substance use	167	86.98
Nil	11	5.73
Alcohol	3	1.56
Nicotine	10	5.21
Alcohol and nicotine both		
OthER	1	0.52
Frequency of Psychoactive Substance use (in last 3 months)		
NA	167	86.98
Daily	7	3.65
3-4times in a week	10	5.21
3-4times in amonth	3	1.56
Less than others	5	2.60
Designation		
Nursing	44	22.92
Interns	42	21.88
SR	18	9.38
Faculty	23	11.98
Others	5	2.60
JR	60	31.25
Department	88	45.83
Interns and nursing staff		
Medicine	8	4.16
Surgery	11	5.73
ENT	9	4.69
PSM	4	2.08
Bio-chemistry	6	3.13
Gastro	2	1.04
Anesthesia	15	7.81
Causality	4	2.08
Eyes	17	8.85
OBG	7	3.65
Pul. Medicine	1	0.52
Neuro-surgery	3	1.56
Cardiology	3	1.56

MO/administration	3	1.56
Pharma	1	0.52
Pathology	4	2.08
Skin	6	3.13

DISCUSSION

In our study we found that most of the participants (77.08%) had some signs of burnout ranging from mild to severe. Various studies before the COVID-19 pandemic on prevalence of burnout among HCWs using different scales have shown different results. In a study by **Singh, 2018** they found that personal burnout score was 41.59±15.76 and work-related burnout score was 36.06±15.95. A study by **Sharma, 2018** on burnout amongst nurses reported that about 63.6% of nurses demonstrated high scores on at least one of the three dimensions (i.e emotional exhaustion, depersonalization and personal fulfilment at work) indicating a high risk for burnout.
The psychological distress for HCWs working in pandemic has been attributed to various factors such as possibility of quarantine, fear of infections due to contagious nature of disease, concern for self and family, job stress, interpersonal isolation, perceived stigma and fear of doing unfamiliar work **(Khasne, 2020).**

The burnout effect of COVID-19 pandemic is presently actively investigated all over the world. A study in Japan by Nishimura, **2021** showed that 50% of the front line HCWs who were engaged in direct care for COVID-19 patients experienced burnout, which was a significantly higher prevalence than those who did not participate in the care of COVID-19 patients. In Indian survey by **Khasne, 2020** of HCWs during the COVID-19 pandemic, high level of pandemic-related burnout among HCWs was found. The female respondents had higher chances of getting burnout, and this may be related to the dual role the females play in running the house, apart from working in the healthcare sector. In our study we also found that burnout among female participants was slightly high as compared to males which was comparable to study by **Khasne, 2020.**

Burnout in HCWs, particularly doctors, has been shown to cause increased medical errors. (Shanafelt**, 2010 & Barnnet, 2017)** It can lead to decreased patient satisfaction and thus increases the chances of litigation. In personal life, there are increased chances of depression, possibly leading to substance abuse **(Khasne, 2020).**

Our study showed that never married participants had slightly more burnout than married participants. This is in contrast to finding in study by Singh, 2020 conducted in pre Covid time.

Limitations

This study was conducted during the COVID-19 pandemic when HCWs were combating with novel highly contagious virus and were very busy. Roles of HCWs in hospital were changed frequently due to rapid spread of the virus. Also, for maintaining, COVID-19 appropriate behaviour it was difficult to spare more time. So, enrolment in the study was not as expected.

CONCLUSION

Burnout amongst health care workers is high particularly in unmarried and female HCWs. In order to reduce the burnout, we need to counsel HCWs regarding stress management and identify vulnerable HCWs promptly.

REFERENCES

1. Caplan, R.D., Cobb, S., French, J.R.P., Harrison, R.V., Pinneau, S.R. (1980). Job demands and worker health: main effects and occupational differences. Ann Arbor, MI: Institute for Social Research.
2. Fahrenkopf, A.M., Sectish, T.C., Barger, L.K., Sharek, P.J., Lewin, D., Chiang, V.W., et al. (2008). Rates of medication errors among depressed and burnt out residents: prospective cohort study. BMJ., 336(7642), 488–491. doi: https://doi.org/10.1136/bmj.39469.763218.BE
3. Freudenberger, H.J. (1974). Staff burnout. Journal of Social Issues, 30(1), 159–165. doi:
4. https://doi.org/10.1111/j.15404560.1974.tb00706.x
5. Barnett, K.A.G. (2017). In pursuit of the fourth aim in health care: The joy of practice. Med Clin North Am., 101(5), 1031–1040. doi: https:// doi.org/ 10.1016/ j.mcna.2017.04.014
6. Khasne, R.W., Dhakulkar, B.S., Mahajan, H.C., and Kulkarni, A.P. (2020). Burnout among Healthcare Workers during COVID-19 Pandemic in India: Results of a Questionnaire-based Survey. Indian J Crit Care Med., 24(8), 664–671. doi: https://doi.org/10.5005/jp-journals-10071-23518
7. Kisely, S., Warren, N., McMahon, L., Dalais, C., Henry, I., Siskind, D. (2020). Occurrence, prevention, and management of the psychological effects of emerging virus outbreaks on healthcare workers: rapid review and meta-analysis. BMJ, 369:m1642.
8. Li, Q., Guan, X., Wu, P, Wang, X., Zhou, L., Tong, et al. (2020). Early transmission dynamics in Wuhan, China, of novel coronavirus-infected pneumonia. N. Engl. J. Med., 382, 1199–1207.
9. Maslach, C. (1976). Burned-out. Hum Behav,9, 16–22.
10. Maslach, C. Jackson, S.E. (1981). The measurement of experienced burnout. Journal of Occupational Behavior, 2(2), 99–113. https://doi.org/ 10.1002/ job. 4030020205
11. Matsuo, T., Kobayashi, D., Taki, F., Sakamoto, F., Uehara, Y., Mori, N., Fukui, T. (2019). Prevalence of Health Care Worker Burnout During the Coronavirus Disease (COVID-19) Pandemic in Japan. JAMA Netw. Open 2020, 3, e2017271
12. Maunder R., Lancee W., Balderson K., Bennett J., Borgundvaag B., Evans S., et al. (2006). Long-term psychological and occupational effects of providing hospital healthcare during SARS outbreak. Emerg Infect Dis., 12(12), 1924–1932. doi: https://doi.org/10.3201/eid1212.060584
13. Menzies, I.EP. (1960). Nurses under stress. InternatlNurs Rev. 7, 9-16.
14. Munster, V.J., Koopmans, M., van Doremalen, N., van Riel, D., de Wit, E. (2020). A novel coronavirus emerging in China - key questions for impact assessment. N. Engl. J.Med., 382, 692–694.
15. Nishimura, Y., Miyoshi, T., Hagiya, H., Kosaki Y., Otsuka F. (2021). Burnout of Healthcare Workers amid the COVID-19 Pandemic:A Japanese Cross-Sectional Survey. Int. J. Environ. Res. Public Health, 18, 2434.
16. doi: https://doi.org/10.3390/ijerph18052434
17. Shanafelt T.D., Balch C.M., Bechamps G., Russell T., Dyrbye L., Satele D., et al. (2010). Burnout and medical errors among American surgeons. Ann Surg, 251(6), 995–1000. doi: https://doi.org/10.1097/SLA.0b013e3181bfdab3
18. Shanafelt, T.D., Gorringe G., Menaker, R., Storz, K.A., Reeves, D., Buskirk S.J., Sloan, J.A., J.A., Stephen, J.S. (2015). Impact of organizational leadership on physician burnout and satisfaction. Mayo Clin Proc., 90(4), 432–440. https://doi.org/10.7326/0003-4819-136-5-200203050-00008
19. doi: https://doi.org/10.1136/bmj.m1642
20. Sharma, R.C., Sharma, D.D., Kanwar, N., Chaudhary, A., Kanwar, P, Kaushik, S. (2018). Assessment of burn-out among staff nurses working in a tertiary care health centre in North India. International Journal of Research in Medical Sciences, 6(12), 3959-3963.
21. doi:http://dx.doi.org/10.18203/2320-6012.ijrms20184890
22. Singh S., Chadha V., Bansal P, Goel, N.K., Gautam, A. Kaushal, S. (2018). Perceived stress, psychological well-being and burnout among medical and paramedical staff at a medical college of northern India. GLOBAL JOURNAL FOR RESEARCH ANALYSIS, 7(5).
23. Zhang, W.R., Wang, K., Yin, L., Zhao, W.F., et al. (2020). Mental health and psychosocial problems of medical health workers during the COVID-19 epidemic in China. Psychother. Psychosom. 89, 242–250.