

Original Article

Assessment of Perceived Stress in Healthcare Professionals Working in a COVID Hospital in West Bengal during COVID-19 Pandemic

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Background : Pandemic, being unprecedented that can leads to several mental health problems, especially among the front-line Healthcare Professionals (HCPs). Front-line HCPs often suffer from many psychiatric morbidities like Anxiety, Depression, Burnout, Insomnia and Stress-related disorders. Despite the huge burden of mental health problems among the front-line HCPs, their psychological health is frequently overlooked.

Aims : This study is aimed to investigate the Perceived Stress in different Healthcare Professionals (HCPs) and to observe any changes occur in this COVID pandemic situation.

Objective : (1) To assess the Perceived Stress in HCPs. (2) To identify the factors associate with Perceived Stress in HCPs.

Materials and Methods : The present study was a Hospital based Cross-sectional observational study. This study was conducted 1.5 years at College of Medicine and Sagore Dutta Hospital, Kamarhati.

In 126 HCPs (Consultants, Senior Resident, Junior Residents, Interns, Nurses, Paramedical Staffs, Non-clinical staffs) were included in this study. 10 Item Perceived Stress Sale (1) was used to assess the psychiatric morbidity.

Result : In our study 65(51.6%) HCPs had low stress, 47(37.3%) HCWs had moderate stress and 14(11.1%) HCWs had High Perceived Stress. 46.15% of Consultants had low stress, 53.84 % had moderate stress but no one had severe perceived stress, in Senior residents 60% had low stress, 20% had moderate and 20% had severe stress, 52.94% Junior Residents had low stress and moderate and severe stress in Junior Resident are 29.41%,17.64% respectively. 55% Interns faced moderate stress where as low stress and severe level of stress in interns are 25% and 20% respectively. 61.11% Nurses had low level stress and 27.77% had moderate stress and only 11.11% had severe stress.

Conclusion : Healthcare Professionals had to do their duty in many adverse situations in COVID pandemic. They had face tremendous mental and physical pressure, frequently they became exhausted, in spite this they did their duty properly and saved millions of lives. So, their mental health should be assessed and proper intervention should be taken.

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Key words : HCPs, PSS SCALE, COVID-19, Perceived Stress.

Currently, the entire humanity worldwide is facing a severe healthcare crisis, that is, the unprecedented COVID-19 pandemic for the 21st-century population. In simpler words, a pandemic is defined as 'an epidemic occurring worldwide, or over a very wide area, crossing international boundaries and usually affecting a large number of people'. However, it is not the first time that humanity is facing a pandemic. Over the last century, many pandemics such as Spanish flu, Severe Acute Respiratory Syndrome (SARS), Middle East Respiratory Syndrome (MERS), Ebola, Swine flu, and so on have emerged and been tackled. Existing literature supports that pandemic, apart from causing mortality

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Editor's Comment :

- All Healthcare professionals are vulnerable to get stressed or any mental health issues in this pandemic situation, which hampered there efficiency and productivity.
- They should visit nearby facility for mental wellbeing.
- Mental health professionals should come forward to help all healthcare workers.

and physical morbidities, also leads to tremendous mental health problems [Insomnia, Anxiety, Depression, Stress-related Disorders including Post-traumatic Stress Disorders (PTSD)] in the sufferers as well as in the non- infected public and in Healthcare professional.

Review of Literature :

Jaber MJ, *et al*¹ found Healthcare Professionals (HCPs) were already vulnerable to mental health issues prior to the COVID-19 pandemic, but now they are even more prone to stress and frustration. Participants reported moderate to extremely severe levels of stress (26.5%) during COVID pandemic.

Lai J, *et al*² found that a considerable proportion

of participants reported symptoms of Depression (50.4%), Anxiety (44.6%), Insomnia (34.0%) and Distress (71.5%).

MATERIALS AND METHOD

Study place : College of Medicine and Sagore Dutta Hospital, Kamarhati.

Study population : All categories of Healthcare Professionals working in COVID wing of College of Medicine and Sagore Dutta Hospital.

Study period : 1 year 6 months.

Study design : Cross-sectional Observational Study.

Sample size/design : There are about 898 Healthcare Professionals (HCPs) Consultants, Senior Resident, Junior Residents, Interns, Nurses, Paramedical Staffs, Non-clinical staffs working in this 500 bedded COVID tertiary centre. From the 'National Mental Health Survey of India, 2015-2016' it is found that the prevalence of any Mental disorder is 10.6%.

In my study Targeted Population is 898. Now I am using Epi Info software, 95% Confidence Interval with 5% error of margin the sample size is 126 in my study. By using computer generated random number table, which will generate 200 random number from the range of 1 to 898. In 74 extra number is chosen because if any subject refuse to participate in the study or getting excluded as per Inclusion and Exclusion criteria.

Inclusion criteria :

(1) Healthcare Professionals working in COVID wing of College of Medicine and Sagore Dutta Hospital.

(2) Who are giving consent for the study.

Exclusion criteria :

(1) Who having known psychiatric problems.

(2) Who are not willing to participate for the study.

Perceived Stress Scale (PSS) was used to assess the Perceived Stress in HCPs.

RESULT

In this study, 13 (10.3%) HCPs were consultant, 20 (15.9%) HCPs were Intern, 17 (13.5%) patients were Junior Resident (JR), 23 (18.3%) HCPs were Non-clinical staff, 36 (28.6%) HCPs were nurse, 12 (9.5%) HCPs were Paramedical Staff and 5 (4.0%) HCPs were nurse (Table 1).

In this study, 85 (67.5%) HCPs were Female and 41 (32.5%) HCPs were Male (Table 2).

The Table 3 showing In Consultant, the mean PSS (Mean±SD) was 14.2308±7.3467.

In Intern, the mean PSS (Mean±SD) was 18.9500±2.3681.

In Junior Resident (JR), the mean PSS (Mean±SD) was 17.4706± 6.6543.

In Non-clinical Staff, the mean PSS (Mean± SD) was 11.8261± 8.0725.

In Nurse, the mean Age (Mean±SD) was 12.2778± 8.7732.

In Paramedical Staff, the mean PSS (Mean±SD) was 13.8333± 8.7918.

In Senior Resident (SR), the mean PSS (Mean±SD) of was 12.6000± 5.8138.

Distribution of mean PSS with Healthcare professional was statistically significant (p<0.0001)

In our study 65(51.6%) HCPs had Low Stress, 47(37.3%) HCPs had Moderate Stress and 14(11.1%) HCPs had high perceived stress (Table 4).

Table 5 showing 46.15% consultant had low stress, 53.84% had moderate stress but no one had severe stress, in Senior Resident 60%had low stress, 20%

Healthcare Professional	Frequency	Percent
Consultant	13	10.3%
Intern	20	15.9%
Junior Resident (JR)	17	13.5%
Non-clinical Staff	23	18.3%
Nurse	36	28.6%
Paramedical Staff	12	9.5%
Senior Resident (SR)	5	4.0%
Total	126	100.0%

Sex	Frequency	Percent
Female	85	67.5%
Male	41	32.5%
Total	126	100.0%

	Number	Mean	SD	Minimum	Maximum	Median
PSS :						
Consultant	13	14.2308	4.5489	9.0000	22.0000	15.0000
Intern	20	18.9500	11.7405	0.0000	39.0000	18.5000
Junior Resident	17	17.4706	9.7411	2.0000	35.0000	16.0000
Non-clinical Staff	23	11.8261	5.1492	2.0000	26.0000	11.0000
Nurse	36	12.2778	9.3430	2.0000	35.0000	10.5000
Paramedical Staff	12	13.8333	7.1711	5.0000	27.0000	15.0000
Senior Resident	5	12.6000	9.2358	2.0000	24.0000	13.0000

Stress	Frequency	Percent
Low Stress	65	51.6
Moderate Stress	47	37.3
High Perceived Stress	14	11.1
Total	126	100.0

Table 5 — Association between Stress and Category of Healthcare Professionals (P value <0.001)

Category of Staff	Stress level		
	Low	Moderate	Sever
Consultant	46.15%	53.84%	0%
Senior Resident	60%	20%	20%
Junior Resident	52.94%	29.41%	17.64%
Intern	25%	55%	20%
Nurse	27.77%	61.11%	11.11%
Paramedics	41.66%	50%	8.33%
Non-clinical Staff	73.9%	26%	0%

had moderate and 20% had severe stress, 52.94% Junior Resident (JR) had low stress and moderate and severe stress, in Junior Resident are 29.41%, 17.64% respectively. 55% Intern faced moderate stress where as low stress and severe level of stress in Intern are 25% and 20% respectively. 61.11% nurse had moderate level stress and 27.77% had low stress and only 11.11% had severe stress. Among Paramedics 50% had moderate stress, among Non-clinical staffs 73.9% had low stress.

DISCUSSION

A study was done in India during COVID pandemic found that proportion of Healthcare Workers under low (PSS 1-13), moderate (PSS 14-26) and severe (PSS 27-40) stress was 15.65%, 78.26% and 6.09% respectively. This findings co-relate with current study⁴. Another study found that the prevalence of stress, as well as anxiety/depression, is higher in registered nurses compared to physicians. This findings also co-relate with current study⁵.

CONCLUSION

In summary, our study is a significant addition to the growing body of literature that lights on the growing mental health crisis amongst Healthcare Professionals in India. This study suggests that the mental health should be carefully monitored during the pandemic, and hospitals and workplaces should give psychological support for adapting to these circumstances through targeted intervention. A comprehensive and proactive strategy of providing mental health services on the entire Healthcare Professionals should be a key focus of all health care institutions and adequate resources should be provided in this direction.

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