



Assessment of Stress among Doctors due to Covid-19

Article History
Received: 04.09.2021 Revision: 17.09.2021 Accepted: 07.10.2021 Published: 13.10.2021 Plagiarism - Plagiarism Detector DOI: 10.47310/iarjmsr.2021.V02i05.03
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How to Cite the Article:
Manoj PK, Keerthi DS and Shwetha P. Assessment of Stress among Doctors due to Covid-19. <i>IAR J. Med & Surg Res.</i> 2021;2(5):14-18.
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Abstract: **Introduction:** During infectious disease outbreaks, doctors are at high risk of infection, infecting others, and psychological distress. This study aimed to determine the prevalence of stress and anxiety in physicians during the COVID-19 outbreak in India. **Material and Methods:** This is a cross-sectional survey-based study conducted at the Department of Psychiatry of a tertiary care medical college and hospital. For the purpose of this study, a Google survey form was created and circulated among all the doctors through WhatsApp groups in June and August 2021. The doctors included JRs, SRs and faculty. All the doctors were included except those who had themselves suffered from COVID-19 or if their family members had suffered since that could have led to increased stress and skewed the findings. The Perceived stress scale (PSS-10) was used to assess perceived stress. **Results:** In this study total subjects are 217 among 128 were males and 89 females. The maximum number of subjects were in the age group of 31-40 years which were 31.7% (n = 69) followed by age group 41-50 years having 36.4% (n = 78) in this group and 17.9% were >51 years. This participant worked at different duties during Covid-19 pandemic era. 23 participants were High stress degree of stress on PSS, 135 (62.2%) Participants displayed moderate degree and 59 (27.1%) shows low level of stress during pandemic era. Further inspection in context of department wise stress distribution reveals that 217 subject among Non-clinical department pool shows high degree of stress were 4.1% moderate degree were 24.8% and 10.5% found having low level of stress. **Conclusion:** Doctors working in COVID-19 wards perceive considerable stress. Stress management should be an integral part of the curriculum of doctors so that they can serve the humanity efficiently and effectively during the pandemic and in future.

Keywords: COVID-19, Stress, Perceived stress scale.

INTRODUCTION

A new corona virus infection compelled a global shift. It forced medical workers to face an unexpected increase in workload. Medical workers worldwide have been subjected to enormous pressure,

discrimination, frustration, overwork, isolation, a lack of contact with their families, and exhaustion in the fight against the 2019 novel coronavirus (2019-nCoV). ^[1] This dire situation is paving the way for mental health issues such as stress, insomnia, depressive symptoms, anger, denial, anxiety and fear in an already vulnerable population. ^[2] Healthcare personnel are going through the most difficult time of their life as they serve the greater good without regard for their own well-being. Under the intense strain to survive and cure threats during this pandemic, the whole medical community faces a variety of mental obstacles. ^[3]

Several sources of distress were quantified in their article "Psychological distress, coping behaviours, and preferences for support among New York healthcare workers during the COVID-19 pandemic," which included fears of COVID-19 transmission, clinical challenges, and perceived lack of control, as well as concerns about family and home life. ^[4] "Psychological symptoms among frontline healthcare workers during the COVID-19 outbreak in Wuhan" suggests that frontline HCWs should be closely monitored as a high-risk group for depression and anxiety, and given proper training (e.g., COVID-19 knowledge, stress management, self-care) before deployment; some may require psychological interventions. ^[5]

"Encouraging the Health Care Workforce" During the COVID-19 Global Epidemic," hospital personnel, including caregivers, support staff, administration, and preparedness teams, will be stressed by the challenges of a prolonged response to COVID-19, and leadership must emphasise the importance of self-care as the centre of the response. ^[6] During the outbreak's fight, Wuhan's healthcare workers were subjected to a great deal of stress. ^[7]

Health-care facilities were not well prepared for such a sudden outbreak of a novel virus, and the pandemic's burden has put an already precarious infrastructure to the test. Health care workers have been entrusted with the responsibility of managing COVID-19 patients, from screening, clinical sample collection (nasopharyngeal swabbing), and admissions to ward rounds, intubations, and performing life-saving procedures. [8]

The psychological effects of medical doctors' stress during the COVID-19 outbreak may have serious consequences for their overall well-being. As a result, it is worthwhile to investigate the level of perceived stress among healthcare workers during the current outbreak. [9] Anecdotal evidence in Wuhan suggests that this situation has an impact on the mental health of physicians who provide front-line care, including anxiety, depressive symptoms, anger, and fear. [10] This study aimed to measure the level of the perceived stress among the medical doctors during coronavirus outbreak.

MATERIALS AND METHODS:

This observational cross-sectional study was carried out. This is a cross-sectional survey-based study conducted at the Department of Psychiatry of a tertiary care medical college and hospital. All the doctors of all specializations including faculty, senior residents (SRs), and junior residents (JRs) were trained in management of patients with COVID-19 by the hospital administration and posted in COVID-19 isolation wards in addition to duties in their respective departments of specializations.

For the purpose of this study, a Google survey form was created and circulated among all the doctors through WhatsApp groups in June and August 2021. The doctors included JRs, SRs and faculty. All the doctors were included except those who had themselves suffered from COVID-19 or if their family members had suffered since that could have led to increased stress and skewed the findings. They were also contacted personally and requested to get enrolled in the survey and fill the form. The total time taken to complete the form was about 10 min. The survey form was circulated once a week for 2 months and it was decided to stop the recruitment when there were no more enrolments in the past two consecutive requests.

Perceived stress scale (Cohen S.) [11]

The PSS-10 was used to assess perceived stress. It is one of the most widely used instruments to assess how unpredictable, uncontrollable, and overloaded the respondents find their lives and how stressful the events in life are perceived to be. It is a self-report instrument consisting of 10 items to assess perceived stress during the past month. Each of the items on the PSS-10 is rated on a 5-point Likert scale, ranging from 0 (never) to 4

(very often). Total scores range from 0 to 40, with higher scores indicating higher levels of perceived stress. A score of 0–13 is considered as low stress, 14–26 as moderate stress, and more than 27 as high stress.

RESULT

In our study, total subjects are 217 among 128 were males and 89 females in table 1. These study subjects are doctors were from all clinical and non-clinical departments and all designation from professors, associate professors, assistant professors, demonstrators to senior and juniors' resident encompass the pool of participants.

Table 1: Distribution of Gender

Gender	Frequency	Percentage
Male	128	59
Female	89	41
Total	217	100

Table 2: Distribution of the number of subjects according to age group

Age group	Frequency	Percentage
<30 years	31	14.2
31-40 years	69	31.7
41-50 years	78	36.4
>51 years	39	17.9
Total	217	100

In this study, the maximum number of subjects were in the age group of 31-40 years which were 31.7% (n=69) followed by age group 41–50 years having 36.4% (n = 78) in this group and 17.9% were >51 years in table 2.

Table 3: Distribution of the marital status

Age group	Frequency	Percentage
Single	71	32.2
Married	145	66.8
Divorced	1	0.4
Total	217	100

In table 3, the maximum number of subjects were married 66.8% (n=145).

Table 4: Overall participant perceived stress score

Stress	Frequency	Percentage
High	23	10.5
Moderate	135	62.2
Low	59	27.1

In table 4 this participant worked at different duties during Covid-19 pandemic era. 23 participants were High stress degree of stress on PSS, 135 (62.2%) Participants displayed moderate degree and 59 (27.1%) shows low level of stress during pandemic era, so this is quite evident that health care professionals are displaying significant levels of stress.

Table 5: Department wise List

	PS Scale	Frequency	Percentage
Non Clinical (86)	HS	9	4.1
	MS	54	24.8
	LS	23	10.5
Clinical (131)	HS	14	6.4
	MS	81	37.3
	LS	36	16.5

In table 5, Further inspection in context of department wise stress distribution reveals that 217 subject among Non-clinical department pool shows high degree of stress were 4.1% moderate degree were 24.8% and 10.5% found having low level of stress. On the other hand of Clinical Department 131 subjects among 6.4% experiences high stress, 37.3% moderate level and 16.5% shows low degree of stress in their day to day life.

DISCUSSION

The present paper focuses on measuring the occupational stress among professional doctors while employing the COVID-19 treatments in the study area. The study concluded that one of the prime purposes for occupational stress among experienced doctors is socio-ecological factors. In a country such as India, more psychiatric morbidity is expected, which is reflected in our study. In our Indian study involving 217 doctors, 23 participants were High stress degree of stress on PSS, 135 (62.2%) Participants displayed moderate degree and 59 (27.1%) shows low level of stress during pandemic era.

In our study, 27.1% presented low stress, 62.2% presented moderate stress and 10.5% presented High stress; this is in full agreement with several studies which highlight the fact that doctors experienced greater stress about their health while caring for infected patients during a pandemic.^[10] Our present study found in line with that research and our study reveals even single doctor could not skip the emotional turmoil and stress during Covid 19 pandemic and more than two third of participants displayed moderate levels of perceived stress and remaining study pool identified with low stress levels and their day to day life. Another study in China involved nearly 4000 healthcare workers using the General Health Questionnaire to assess their mental health status had revealed 40% of them had psychological distress, especially those from Wuhan.^[12] This was due to the frequent risk of exposures together with an insufficient number of personal protective equipment.^[13]

Poor mental health among healthcare workers, particularly doctors, is harmful not only to themselves, but also to their patients, organizations, and healthcare services. For instance, various studies before the emergence of COVID-19 have shown that fatigued

doctors are at high risk of having commuting accidents, contracting needle stick injury, making diagnostic, medical and clinical errors, and experiencing poor recovery.^[14] Fatigue among doctors is also associated with less enjoyment in work and high turnover intention.^[15]

In above said research that excessive working hours, continue use of personal protection equipment's, few resources, limited clinician and other trained staff cause great distress and various psychological complications like irregular sleep, frustration, death of patients causing sadness of mood, helplessness and a chore dilemma for human existence came across frontline doctors which is well documented in our study. Many seminal works also address mental health consequences include adverse health and wellbeing, work-life dissatisfaction, low quality of life, job dissatisfaction, and poor skill performance.^[16]

On the other hand, depressed doctors have been associated with improper medical treatment and adversely affect the attitudes towards patient care.^[17] One of the study findings shows that role insufficiency among doctors had the strongest association with depressive symptoms.^[18] This was supported by a study reported on the years of services that are shown to have a significant association with depression.^[19] Meanwhile, anxiety among doctors was associated with the inappropriate judgment made by the doctor due to emotional exhaustion and reduces sleep quality.^[20] As for stress, doctors who are stressed tend to perform lower than their capability resulting in low work productivity and an increase in the frequency of absenteeism.^[21] A recent study indicated that stress potentially influences unplanned absenteeism among healthcare workers, which may consequently disrupt the delivery of healthcare services.^[22]

Increasing job demands, this could lead to multiple adverse consequences as like depression, anxiety and insomnia etc. Our other objective is quite newer in research area and making comparison among clinical and non-clinical doctors lead us on few important discussions and conclusion. In present study, clinical branches found more stressed in comparison to non-clinical stream specialists. Interestingly some non-clinical branches like microbiology and community medicine displayed higher stress this might be because Microbiology is centre for RTPCR testing and community medicine directly involved in field survey and monitoring.

Limitation: Only physicians were included in this study, while other healthcare workers such as nurses can be at higher risk of infection due to more close and frequent contact with patients and working for longer hours. The survey was initially designed as two separate Google forms, one for the perceived stress component and the other for the generalized anxiety component.

Such a design is problematic and analyzing the two sets of data together limits the validity of the study. Designing the survey as one form with different sections and as one submission will help in avoiding this difference in response rate, although this might not increase the overall response rate. We could not conduct a correlation between stress scores and generalize anxiety disorder scores because of using two separate Google forms. Conducting such a correlation would have been interesting and useful.

CONCLUSION

The present paper focuses on measuring the occupational stress among professional doctors while engaging the COVID-19 treatments in the study area. The COVID-19 pandemic has created a tumultuous wave in every human's personal and professional lives on the planet. While doctors face a exceptional set of obstacles and dilemmas that want special attention, several have also experienced a silver lining amidst this chaos in the form of family life and lifestyle changes. Regardless, COVID-19 has been a game-changer for everyone. The doctor has significantly affected their personal life and leads to occupational stress while engaging the COVID-19 treatments in the study area.

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