



ORIGINAL RESEARCH PAPER

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EFFECT OF COVID 19 ON THE MENTAL HEALTH OF MEDICAL PRACTITIONERS

KEY WORDS:

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ABSTRACT

Introduction:The declaration of the Novel Coronavirus (COVID-19) as a pandemic leads to the implementation of surge plans and an increase in the number of intensive care unit (ICU) beds across most health care facilities. Health care workers (HCWs) in the ICU are frontlines of this crisis as they deal with critically ill patients affected by COVID-19 which can potentially affect their mental well-being and causes different levels of stress and psychological disorders. The main objective of this study was to assess the work-related stress of healthcare professionals during the covid-19 pandemic. Secondary objectives were to compare the stress of medical doctors with that of paramedical staff, and to evaluate the consequences of personal risk factors such as gender, age etc. **Materials and Methodology:**A cross-sectional study was conducted by including 100 doctors from the M.R.A. MEDICAL COLLEGE, AMBEDKAR NAGAR. A structured, pre-validated, self-administered questionnaire was used to evaluate the demographic variables and the factors related to the stress in the medical professionals. Perceived Stress Scale-10 (PSS-10) was used to find out the levels of the stress in the doctors based on the perceptions about their life before and during COVID-19 outbreak. **Result and Discussion:** It is evident from the study that most of the participants ie. 66% if them were in the category of moderate stress , 24 % were in the low Stress category and only 10% of them were in high Stress category before the inception of Covid 19 which has been increased to 25% during the Pandemic. There was no significant difference found in the stress level among participants on the basis of gender with t value 0.835. The stress score was found to be significantly different in case of Clinical and nonclinical Department; Marital status as well as in case of addicted and non addicted. The average stress score was found to be highest in age group 41-45 as 29.44±6.84, followed by 28.4± 10.54 and 28.88±8.16 in age group of 36-40yrs and 46-50 yrs respectively. The least was found to be as 19.66±7.76 in the age group of 20-25 yrs. In case of designation the highest stress score was observed in Professor grade followed by Assistant Professor and Associate Professor. The least stress score was found in case of demonstrator. **Conclusion:**The study have depicted the various level of stress level among the health workers during the pandemic. The factors responsible for the higher stress level among medical practitioners were recognized during the research so as to combat these stresses on them by adopting different ways of supporting them during this crucial time.

Introduction

Coronaviruses are important human and animal pathogens. In December 2019, a novel coronavirus was identified as the cause of a cluster of pneumonia cases in Wuhan, a city in the Hubei Province of China. It rapidly spread, resulting in an epidemic throughout China, followed by an increasing number of cases in other countries throughout the world. In February 2020, the World Health Organization designated "COVID-19" pandemic, as an ongoing pandemic for coronavirus disease 2019 [1]. The virus that causes COVID-19 is named severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2); previously, it was referred to as 2019-nCoV. Therefore, the declaration of the Novel Coronavirus (COVID-19) as a pandemic leads to the implementation of surge plans and an increase in the number of intensive care unit (ICU) beds across most health care facilities.

The ICU can be a stressful environment for patients, relatives, and health care professionals. Growing evidence suggests that stress and burnout among ICU nurses [2] and ICU physicians is the result of the demanding and continuously high stressful work environment [3, 4]. Healthcare professionals (doctors) are subject to extra pressures in addition to the psychological impact of the social crisis due to active involvement in the treatment of infected patients and

heightened risk of illness, fear of transmission to their relatives, anxiety for themselves and the wellbeing of loved ones, feeling stigmatized and isolated and operating under extreme pressure. At the other hand, the number of cases and illness-related deaths, excessive workload for an extended period of time and the loss of workers safety equipment was exacerbated by mental and physical burnout over time.

Burnout is considered as a distinct state of psychological stress generated by the individual's occupation and/or workplace and is identified as such in the World Health Organization's International Classification of Diseases.[2,3] The prevalence of burnout has been found to be as high as 75% among doctors.[4] Workplace stress affects the performance of the brain, including functions of work performance memory, concentration, and learning. Although small amount of stress can have positive effects by energizing people toward goals, excessive stress may seriously and negatively affect a person's health and job performance. Stress may originate from personal and professional life of the person, affecting that person as a whole. At an individual level, burnout among doctors has been associated with lower career satisfaction, higher absenteeism, greater probability of leaving the profession prematurely or choosing early retirement, and greater risk of experiencing difficulties in

interpersonal relationships, such as with family and partners.[5,6] All these factors affect the working capacity and efficiency of the health-care providers and thus have a deteriorating effect on the doctors, hospitals, and the patients. As stress among doctors is not taken into much consideration and often a neglected topic, so this study was planned with objectives of estimating the prevalence of stress among doctors in our region and to find the associated risk factors for the same. Certain socio-demographic factors such as gender or age can also influence the level of stress at work and thus represent a risk factor. This is the case among nurses, where women are more stressed than men [7]. Age appears to be a protective factor for all workers during the pandemic and older people have developed specific coping strategies that preserve them from high levels of stress [8]. The main objective of this study was to assess the work-related stress of healthcare professionals during the covid-19 pandemic. Secondary objectives were to compare the stress of medical doctors with that of paramedical staff, and to evaluate the consequences of personal risk factors such as gender, age etc.

Materials and Method

A cross-sectional study was conducted by including 100 doctors from the M.R.A. MEDICAL COLLEGE, AMBEDKAR NAGAR. Complete enlistment procedure was followed for the enrolment of the participants which includes Interns, junior residents, senior residents, consultants, professors, and head of the department. Out of the total list, 100 participants responded and included in this research work. However, those who were not available and did not consent to participate were excluded from the study.

Sample size:

According to a study conducted among M.R.A. Medical College, Ambedkar Nagar, from March 2020 to June 2021. The research contained questions related to demographic profiles and causes of occupational stress of doctors. Total 100 participants were taken for the study.

Methodology:

A structured, pre-validated, self-administered questionnaire was used to evaluate the demographic variables and the factors related to the stress in the medical professionals. Perceived Stress Scale-10 (PSS-10) was used to find out the levels of the stress in the doctors based on the perceptions about their life before and during COVID-19 outbreak. All those who were willing to participate and were the employee of the institution were enrolled in the study. Incomplete proforma and those doctors who could not be contacted in three consecutive visits were excluded from the study. Demographic variables were mentioned in terms of frequency and percentages. PSS scores were obtained by reversing responses (e.g., 0 = 4, 1 = 3, 2 = 2, 3 = 1, and 4 = 0) to the four positively stated items (items 4, 5, 7, and 8) and then summing across all scale items. Scores obtained were mentioned as means and categorization of the stress levels was done according to the protocol (scores of 0-13 - low stress levels, 14-26 score - moderate stress levels, and 27-40 scores - high perceived stress levels). Chi-square, t-test, and one-way ANOVA were used to find out the association of the stress levels with the different demographic variables.

Ethical consideration:

The study was initiated after taking the ethical approval from the Institutional Ethics Committee. Informed verbal consent was taken from each participant after briefing them about the type of the research and assuring the anonymity of the data collected. Study architecture, population and sample, data collection, and process of data analysis is illustrated in the methodology. Methodology is the overall research method, beginning from defining the issue to the final data collection plans.

Result and Discussion

The study has included total of 100 participants, out of which 75% were men and 25% of them were females. The average age of the study population was found to be 32.26±7.15 yrs. Most of the participants(52%) were found to belong to the age group of 26-30 followed by 31-35 yrs (17%). 30 percent of the participants were working as Intern followed by 25% as Junior residents 12% as Senior residents and 12% as Assistant professor. Most of them ie. 78 % of them belong to the Clinical Department and only 22% were from non clinical department. 45% of the participants were married and 55% of them were unmarried.

Table 1: Demographic distribution of the participants.

Variable	Subgroup	Frequency	Percentage
Gender	Male	75	75%
	Female	25	25%
Age Category	20-25	3	3%
	26-30	52	52%
	31-35	17	17%
	36-40	10	10%
	41-45	9	9%
	46-50	9	9%
Working As	JR	25	25%
	Intern	30	30%
	SR	12	12%
	AP	12	12%
	Associate Professor	9	9%
	Professor	4	4%
	Demonstrator	8	8%
Department	Clinical	78	78%
	Non clinical	22	22%
Marital Status	Married	45	45%
	Unmarried	55	55%

Table 2: Distribution of total stress scores.

Stress level	Frequency before covid	Percentage	Frequency during covid	Percentage
Low stress (0-13)	24	24%	14	14%
Moderate stress (14-26)	66	66%	61	61%
High perceived stress (27-40)	10	10%	25	25%

The study has shown that the stress score for male was 25.04±7.74 and for Female 23.52±7.92 during covid. There was no significant difference found in the stress level among participants on the basis of gender with t value 0.835. The stress score was found to be significantly different in case of Clinical and nonclinical Department; Marital status as well as in case of addicted and non addicted.

Table 3: Association of the mean stress scores with the demographic variables.

Variable	Subgroup	Mean ±SD	t value	P value
Gender	Male	25.04±7.74	0.835	0.40
	Female	23.52±7.92		
Department	Clinical	26.91±6.94	5.0	0.001
	Non Clinical	18.09±7.08		
Marital Status	Married	27.55±7.65	3.5	0.001

	Unmarried	22.30±7.14		
Addiction	Addicted	26.68±7.69	4.2	0.001
	Nonaddicted	23.27±7.61		

Table 4: Association of the mean stress scores with age, designation, and addiction habits of the participants.

Variable	Subgroup	Mean ±SD	F value	P value
Age Group	20-25	19.66±7.76	3.44	0.007
	26-30	27.21±6.70		
	31-35	26.11±6.9		
	36-40	28.4± 10.54		
	41-45	29.44±6.84		
	46-50	28.88±8.16		
Designation	JR	27.04±6.45	11.26	0.001
	Intern	21.56±4.41		
	SR	24.16±9.57		
	AP	30.08±6.80		
	Associate Professor	28.11±6.65		
	Professor	33.5±9.14		
	Demonstrator	13.25±3.32		

The association of stress score was found significant in case of age group as well as Designation of doctors. The average stress score was found to be highest in age group 41-45 as 29.44±6.84, followed by 28.4± 10.54 and 28.88±8.16 in age group of 36-40yrs and 46-50 yrs respectively. The least was found to be as 19.66±7.76 in the age group of 20-25 yrs. In case of designation the highest stress score was observed in Professor grade followed by Assistant Professor and Associate Professor. The least stress score was found in case of demonstrator.

Discussion

The study has shown the prevalence of stress among the health workers during this pandemic. The spread of pandemic has brought a tremendous pressure on health care worker as they have to get exposed to the infection directly and manage the severity related to the pandemic. Overall, the sample showed a PSS-10 score of 22 which is higher than that reported in the general population <13 according to Cohen and Williamson [5] and close to the values reported by Chua et al. [6], during the SARS outbreak in 2003, which placed it at 18.5. Some studies done in the past reported that Health care workers, especially those working in emergency units, intensive care units, and infectious disease wards, are at higher risk of developing adverse psychiatric impact [9]. In addition to the intense media coverage with reports from different countries which address a high rate of infections in the health care professionals, they will undoubtedly show the emotion of fear, anxiety, anger, and frustration [10, 11]. Professional factors included emergency duties and intradepartmental working environment, which causes significant stress among the doctors. However, problems in the personal life such as staying away from the family, not able to give adequate time to their family life, any sickness in the family, lack of proper sleep and rest, and not having time to pursue their hobbies – all induces stress among the medical personnel.

Conclusion

The study have depicted the various level of stress level among the health workers during the pandemic. The factors responsible for the higher stress level among medical practitioners were recognized during the research so as to combat these stresses on them by adopting different ways of supporting them during this crucial time.

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