

A comparative study among clinical and non clinical medical professional's experiences perceived stress during Covid -19 pandemic era, at tertiary health care centre in central India

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Received: 10-07-2021 / Revised: 09-08-2021 / Accepted: 06-09-2021

Abstract

Background: The COVID-19 pandemic changed the daily routines of each individual worldwide in tandem with efforts to prevent and control the transmission of COVID-19. The increasing trend of suspected and confirmed cases of COVID-19 required healthcare workers, particularly doctors, to be involved in the management of the COVID-19 pandemic such as contact tracing, diagnosis, treatment, and care of patients with COVID-19. **Methodology:** This is a cross sectional study has been conducted at Government Medical College and associated hospital, Datia, MP, India during April 2021 to June 2021 among doctors who did different duties in covid-19 pandemic era and comparison between clinical and non clinical specialist in terms of perceived stress. Participants surveyed by socio demographic Performa and Perceived Stress Scale [PSS-10]. **Results:** Study discloses significant level of stress among medical professionals invariable of gender, age and department. Clinical specialist displayed higher range of perceived stress in comparison of non clinical doctors. **Conclusion:** Understanding and addressing the mental health issues of health care professionals is important in terms of their efficiency and adaptability towards current scenario of Covid-19 pandemic and this is also noteworthy to identify and neutralise their rising burden of stress and promotion of positive mental health.

Keywords: Coronavirus, Perceived stress, Medical professionals

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Introduction

Present world is different world of two years before where peoples breath in free air, enjoy privilege of being free to go anywhere and humans not thinking of being ill or shortage of oxygen , medicines, hospital beds but contagion pandemic of Coronavirus made happen all these atrocities to mankind. The COVID-19 pandemic changed the daily routines of each individual worldwide in tandem with efforts to prevent and control the transmission of COVID-19 [1]. The increasing trend of suspected and confirmed cases of COVID-19 required healthcare workers, particularly doctors, to be involved in the management of the COVID-19 pandemic such as contact tracing, diagnosis, treatment, and care of patients with COVID-19 [1]. There is some noteworthy difference among clinical department where there is dealing with patient in terms of diagnoses, treatment as well as teaching of medical students and nonclinical department are involved in teaching of medical students for eg anatomy, physiology, biochemistry, some other department where teaching training of students as well as partial interaction with patients like anesthesia, radiology, pathology. So this is quite clear that clinical department like pulmonary medicine, medicine had maximum exposure while non clinical specialties have less direct contact with covid19 pt. but during this second wave every doctor has to take

responsibilities some of doing field survey some of doing administrative work some have to conduct contact tracing. So each and every doctor has demanded his contribution in this pandemic. In this situation, doctors may face a higher level of work demands related to the mental (such as working on diagnosis as COVID-19 symptoms mimic other mild common diseases), physical (such as prolonged working in complete personal protective equipment attire under hot and humid conditions), temporal (such as managing multiple urgent cases under time constraints) and emotional (such as dealing with patients' death and dying) context. Those doctors who were not directly involved in the management of COVID-19 cases could also be similarly affected. For instance, they may face increased work demands when limited resources, particularly human resources, are being channelled into the management of COVID-19. In addition, patients who are unrelated to COVID-19 at major hospitals are likely to be transferred to other "Non-COVID-19" hospitals which consequently cause patients' influx and increase work demand. As of increased magnitude of various work demands, render doctors at great stress and pressure of their lifetime of their professional and personal life. This is accounted by established research that psychological state that people experience related to the activities they pursue during non-work time such as psychological detachment from work, control over leisure time, relaxation and mastery [2]. High work demands potentially spillover into the non-work home domain, causing difficulty in psychologically detaching from work or in controlling their leisure time, consequently resulting in stress [3-5]. Being mentally or emotionally attached to work as a consequence of high mental or emotional demands may also make psychological detachment from work difficult during the intershift period [4]. The implementation of movement control order or lockdown could also limit involvement in outdoor physical activities that potentially affect recovery and ongoing psychological disturbances [1]. As a result, it is

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plausible that doctors do not recover from their ever-lid lead to multiple adverse consequences. As a result of increasing work demands and possible poor experiences of recovery, healthcare workers, including doctors, are at risk of developing psychological distress and other mental health symptoms [6].

Aims and objectives

- To study Sociodemographic variables of health care workers
- To study perceived stress among health care professionals
- To compare difference in perceived stress among clinical and non clinical medical professionals

Materials and Methods

This is a cross sectional study has been conducted at Government Medical College and associated hospital, Datia, Madhya Pradesh, India, during April 2021 to June 2021 among doctors who did different duties in covid-19 pandemic era eg. Fever clinics, Triage clinics, HDU, Oxygen supported beds, Field surveillance, Vaccination duties, RTPCR lab, ICU, Psychosocial support and counselling etc. and agree to give consent. Participants surveyed by sociodemographic Performa and Perceived Stress Scale [PSS-10]. Medical professional those are not assigned on Covid-19 duties and not willing to give consent excluded from study. Participants recruited in study by convenient sampling. No investigation or drugs given in this study.

Instrument

Perceived stress scale (Cohen S.)

The Perceived Stress Scale (PSS) is the most widely used psychological instrument for measuring the perception of stress. It is a measure of the degree to which situations in one's life are appraised as stressful. This scale comprises of 10 Items, these items were designed to tap how unpredictable, uncontrollable, and overloaded respondents find their lives. The scale also includes a number of direct queries about current levels of experienced stress. The tool has a 5-point Likert response. Each item was scored with 0 = Never, 1 = Almost Never, 2 = Sometimes, 3 = Fairly Often, and 4 = Very Often, which was employed to evaluate each item. The total score ranged from 0 to 40. The reliability of PSS-10 was very high ranging from 0.71 to 0.86, which was validated in different settings, languages,

and population. The PSS was designed for use in community samples with at least a junior high school education. The items are easy to understand, and the response alternatives are simple to grasp. Moreover, the questions are of a general nature and hence are relatively free of content specific to any subpopulation group. The questions in the PSS ask about feelings and thoughts during the last month.

Statistical Analysis

Statistical analysis was done by using SPSS version 20 (SPSS Inc., 233, South Wacker Drive, 11th Floor, Chicago, IL, 60606-6412). Results were expressed as mean ± standard deviation and were analyzed by unpaired Student's t-test. The level of significant was set as P < 0.05: Significant and P > 0.05: Non significant.

Results

As displayed in figures and graphs

Table no. 1 shows that in our study total subjects are 110 among 82 were males and 28 females. Participant's age ranges from 25 to 56 years. 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. These participants worked at different duties during Covid-19 pandemic era. 74 (69%) Participants displayed moderate degree of stress on PSS and 36 (31%) shows low level of stress during pandemic era, so this is quite evident that health care professionals are displaying significant levels of stress. Further inspection in context of gender wise stress distribution reveals that 48 subject among male pool shows moderate degree and 34 found having low level of stress with mean of 15.82 with SD 5.44. In other hand of female population 16 subjects among 28 experiences moderate level and 12 shows low degree of stress in their day to day life with mean of 13.21 and SD 5.08 as elaborated in **Table no. 2**. And **Graph 2** displayed that from clinical departments total of 56 participants among them 38 displayed moderate levels of stress and 18 shows low level of perceived stress and from non clinical department total of 54 subjects among them 36 shows moderate degree and 18 displayed low levels of perceived stress, there were standard deviation for non clinical stream is 5.95 and SD for clinical speciality is 4.98

Table 1 Overall participant perceived stress score

S N	N	PS Scale
1	0	HS
2	74	MS
3	36	LS

Table 2: Department wise list

S N	DEPARTMENT	PS Scale	N	Mean	SD
1	Non Clini. (54)	MS	36	15.04	5.95
		LS	18		
2	Clini. (56)	MS	38	15.28	4.98
		LS	18		

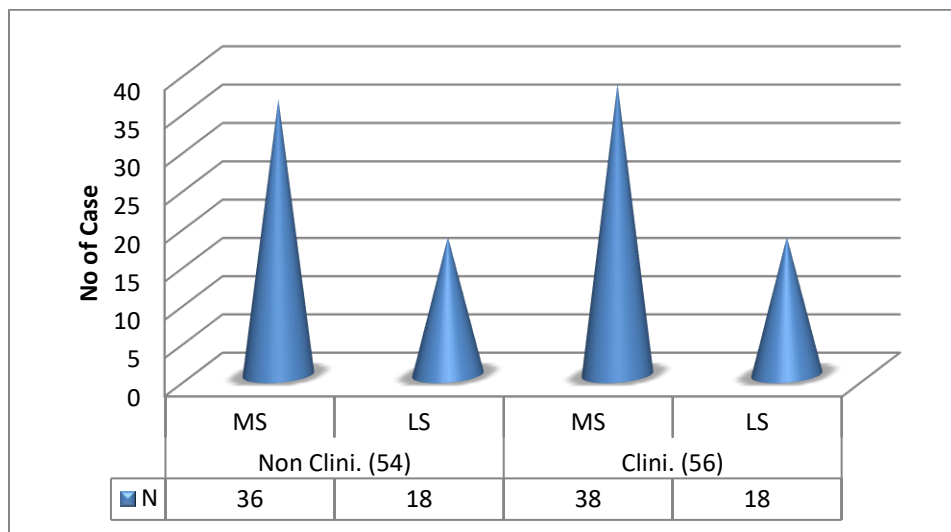


Fig 2 : Department wise list

Table 3. Department wise work role and contribution during Covid 19 pandemic

Sr. No.	Department	COVID 19 Work /Role/Contribution	CLINICAL/NON CLINICAL	PSS levels
1.	Medicine	Patients Treatment, Fever clinic	Clinical	Moderate
2	Pulmonary Medicine	Patients Treatment, Fever Clinic	Clinical	Moderate
3	Surgery	Patients Triage, Monitoring	Clinical	Low
4	Orthopedics	Monitoring And Support	Clinical	Low
5	Pediatrics	Patients Monitoring, Oxygen Monitoring	Clinical	Moderate
6	Psychiatry	Patients Monitoring , Counseling , Psychosocial Support	Clinical	Low
7	Dermatology	Triage , Monitoring , Support	Clinical	Low
8	ENT	Patients Treatment	Clinical	Moderate
9	Ophthalmology	Patients Monitoring, Mucormycosis Management	Clinical	Low
10	Anesthesia	Intensive Care	Clinical	Moderate
11	Pathology	Laboratory Workup Of Covid Patients	Para Clinical	Moderate
12	Community Medicine	Field Surveillance, Epidemiological Work	Non Clinical	Moderate
13	Microbiology	RT-PCR Lab	Non Clinical	Moderate
14	Biochemistry	O2 Monitoring, Triage , Auxiliary Lab Reporting	Non Clinical	Low
15	Gynecology And Obstetrics	ANC And PNC Care Of Covid Patients	Clinical	Moderate
16	Radiotherapy	Patients Monitoring And Support	Clinical	Low
17	Radiology	Assessment And Reporting Of Covid Patients	Clinical	Low
18	Physiology	Triage , Equipment And Data	Non Clinical	Low
19	Anatomy	Auxiliary Support, Triage	Non Clinical	Low
20	Dentistry	Patients Treatment, Triage , Mucormycosis Management	Clinical	Moderate
21	Pharmacology	Auxiliary Support, Triage, Field Surveillance, Fever Clinics	Non Clinical	Low
22	Forensic Medicine	Triage	Non Clinical	Low

Discussion

Multiple studies related to mental health concerns have been conducted among healthcare workers. For instance, Rossi et al. (2020) conducted a cross-sectional study in March 2020 immediately preceding the COVID-19 contagion peak in Italy through an online questionnaire among all healthcare workers in Italy [7]. A total of 1379 healthcare workers completed the questionnaire. They found that 49.38% experienced post-traumatic stress symptoms, 24.73% had symptoms of depression, 19.80% reported symptoms of anxiety and 21.90% experienced high perceived stress [7]. 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 in 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 [8]. This was due to the frequent risk of exposures together with an insufficient number of personal protective equipment [8]. 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 Int. J. Environ. Res. Public Health 2020, 17, 7340 3 of 16 studies before the emergence of COVID-19 have shown that fatigued doctors are at high risk of having commuting accidents [9], contracting needle stick injury [10], making diagnostic, medical and clinical errors [11,12], and experiencing poor recovery [5]. Fatigue among doctors is also associated with less enjoyment in work [13] and high turnover intention [14]. In above said research that excessive working hours, continue use of personal protection equipments, 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 [15]. On the other hand, depressed doctors have been associated with improper medical treatment and adversely affect the attitudes towards patient care [16]. One of the study findings shows that role insufficiency among doctors had the strongest association with depressive symptoms [16]. This was supported by a study reported on the years of services that are shown to have a significant association with depression [17]. Meanwhile, anxiety among doctors was associated with the inappropriate judgment made by the doctors due to emotional exhaustion and reduces sleep quality [18]. 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 [19]. A recent study indicated that stress potentially influences unplanned absenteeism among healthcare workers, which may consequently disrupt the delivery of healthcare services [20]. 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. Among all Medicine and pulmonary medicine doctors found highest levels of stress and Anatomy and Physiology display lower levels of stress. Interestingly some non clinical branches like microbiology and community medicine displayed higher stress this might be because Microbiology is center for RTPCR testing and community medicine directly involved in field survey and monitoring refers to **Table No.3**. Major limitation of this study is cross sectional in nature and for generalization of results more longitudinal studies required. Geographical variation can be significant factors.

Conclusion

Most conclusive essence of study is no doctor devoid of stress during this contagion and each and every doctor has performed and put their own life at threat. So considering that fact all stakeholders and policy formers should take proper steps for mental wellbeing of doctors on duty and immediate addressal of their concerns decrease any major psychological breakdown and enhance quality health services for betterment of mankind.

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Conflict of Interest: Nil

Source of support: Nil