

To evaluate experience and perception of resident doctors in relation to covid 19 duties

¹Charulata Patidar, Postgraduate student, Department of Anaesthesiology, Gandhi Medical College, Bhopal, India.

²Tahir Ali Khan, Associate Professor, Department of Emergency Medicine, Gandhi Medical College, Bhopal, India.

³Urmila Keshari, Professor, Department of Anaesthesiology, Gandhi Medical College, Bhopal, India.

⁴Richa Pandey, Post Graduate Student, Department of Anaesthesiology, Gandhi Medical College, Bhopal, India.

Corresponding Author: Richa Pandey, Post Graduate Student, Department of Anaesthesiology, Gandhi Medical College, Bhopal, India.

How to citation this article: Charulata Patidar, Tahir Ali Khan, Urmila Keshari, Richa Pandey, “To evaluate experience and perception of resident doctors in relation to covid 19 duties”, IJMACR- September – October - 2022, Vol – 5, Issue - 5, P. No. 82 – 88.

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Type of Publication: Original Research Article

Conflicts of Interest: Nil

Abstract

Background: Coronavirus is a highly infectious disease which was declared as pandemic in March 2020 by WHO. Some health workers were facing stigmatization and even their families wanted to be disassociated due to a constant stream of negative news. This outbreak was a unique and unprecedented scenario for most of the health workers and their families too. Most of the doctors had no one else to take care of their children or families during times of self-isolation or quarantine. Doctors are there to treat but their views should be considered and addressed. The present study has been done to explore the knowledge, experience, and perceptions of doctors regarding this pandemic and how it influences them.

Aim: This study was done to assess the perceptions, expectations and fears of doctors during the Covid-19

pandemic and identify the areas which needed to be addressed.

Method: A questionnaire (25 questions regarding their awareness, experience and perception related to Covid 19) was sent through WhatsApp and email to the residents of various departments of Gandhi medical college who had done covid duties in last 12 months. First 100 responders (50 from core departments and 50 from non-core departments) were included in the study. For our study, Core departments included Anaesthesia, Medicine and Pulmonary medicine whereas rest of the departments were regarded as noncore departments. Data was collected from residents via questionnaire. Statistical Analysis Plan Data was compiled and analysed using MS EXCEL.

Result: Out of 100 study participants, >44% experienced covid duties as burdened, also experienced different kind of difficulties while using PPE kit. There

was a deep psychological impact of covid duties observed in terms of fear (>70%), depression (>84%) >45% were having anxiety and stress and anger. Significant predictors for psychiatric morbidities were experience in health sector, duty hours, use of protective measures. Multivariable logistic regression showed most of the factors to be significantly associated with the high rates of mental health issues including depression, anxiety, sadness.

Conclusion: This was an observational study covered both core and noncore residents and their experience in covid duties and related psychological stress. Besides all, they are doing their best efforts and dedication in treating covid patient.

Keywords: Covid 19, residents, fear

Introduction

In January 2020 the World Health Organization (WHO) declared the outbreak of a coronavirus disease, COVID-19, to be a Public Health Emergency of International Concern.^[1] In March 2020, WHO made the assessment that COVID-19 can be characterized as a pandemic. There was unfiltered non-scientific information bombardment ^[2] which affected the health care professionals who were directly exposed to a new virus creating havoc. Doctors are amongst the people most at risk of getting the disease Resident physicians have the most prolonged contact with patients as they represent the first communication interface between the attending physician and the patient. They are playing a critical role in the fight against COVID-19, pulling long shifts and putting themselves at risk of infections to care for patients.

Their work involves initial and ongoing assessment of patient's medical status, developing a treatment plan, recording progress notes, ordering tests, and also

arranging for discharge and aftercare including patient education and counselling. Some health workers were facing stigmatization and even their families wanted to be disassociated due to a constant stream of negative news.^[3] This outbreak was a unique and unprecedented scenario for most of the health workers and their families too. Since the spread of the pandemic to our hospitals, the attention of resident doctors is also required for mastering the art of donning Personal Protective Equipment (PPE) and implementing and understanding triage policies.

It caused undue stress and restlessness when colleagues were sick or on ventilator in ICU due to coming in contact with Covid-19 ^[4] Most of the doctors had no one else to take care of their children or families during times of self-isolation or quarantine. As every time a doctor falls ill the already strained health system gets a blow. The biggest concern is bringing the virus home to their families. There is also a fear that if they fall ill, they will be betraying the health system and their patients as they will not be able to contribute.

These challenging times were as hard for the patients, communities as well as the health care staff. There was a need to assess the fears, expectations and perceptions of resident doctors. Doctors are there to treat but their views should be considered and addressed. This study was conducted to assess the perceptions, expectations and fears of doctors during the Covid-19 pandemic and identify the areas which needed to be addressed.

Materials and methods

The present study is a prospective and observational study which was conducted on 100 resident doctors who worked during covid pandemic at Gandhi Medical College and associated Hamidia Hospital, Bhopal.

Inclusion Criteria

Resident doctors of various department of Gandhi medical college and Hamidia hospital who had done duties in covid wards during pandemic.

Exclusion Criteria

Resident doctors of department who had not done covid duties.

Study Duration: FEB2021 – MARCH 2021

Methodology

After institutional ethics committee approval and informed consent from the participants, a questionnaire was prepared which has two sections,

Section A: sociodemographic characteristics

The sociodemographic characteristics include age of respondents, sex, department.

Section B: experience of residents during covid duties, perception and practices regarding COVID-19.

which includes 25 questions, was sent through WhatsApp and email to the residents of various departments of Gandhi medical college who had done covid duties in last 12 months. First 100 responders (50 from core departments (Anaesthesia, Medicine and Pulmonary medicine) and 50 from other departments) were included in the study.

consent to participate

Permission for the study was sought from the respondents and the confidentiality of information was ensured. The respondents were informed of their right to decline or withdraw from the study at any time without any adverse consequences. No harm was inflicted on participants because of participation in this study.

Statistical Analysis

Data was collected from residents via questionnaire Data was saved in Excel sheets directly from the Google forms. and, SPSS version 25 was used for statistical

analysis. Age was summarized using mean and standard deviation, while frequencies and percentages were used for categorical variables. For comparisons between the groups, t-test was used for continuous variables and Chi-square tests were used for categorical variables.

Results

A total of 100 responders were taken for this study. The study included 68(68%) Female and 32(32%) Male participants. The mean age was 28±2.21 years. (Table1) Among 100 responders, 75 were from the core department: 43-Anesthesia 22-medicine 10-pulmonary medicine and 25 were from the non-core departments 6-Radiology 8-ENT 5-Obstetrics 6-ophthalmology.

Table 1: Demographic Characteristics

Age (years)	Core department N=75	Non-core department N=25
23-27	18	1
27-30	46	19
31-35	11	5
Sex		
Male	19	13
Female	56	12

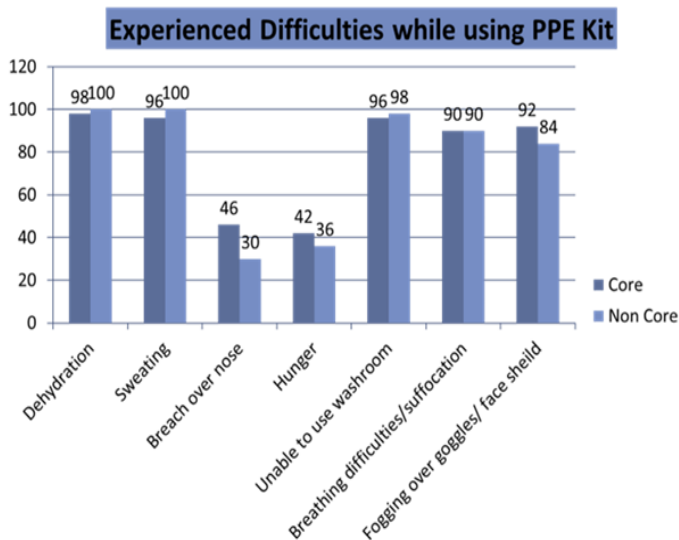
Experience of doctors

Out of 100 participants, 68% were from core departments and 40% from non-core departments who worked in ICU settings before covid 19. We found that more than 50% residents felt comfortable in doing morning shift of covid duties and most residents don't prefer afternoon shift and 32% and 36% from core and non-core respectively felt covid duties as burdened. Among the participants 40% from the core and 16% from the non-core residents were infected while working in covid ICU and among them 36% from core residents were symptomatic. (Table 2) (Graph 1)

Table 2: experience of residents

	Residents	Core	Non-Core
1.	No. of residents who worked in ICU settings in managing critical patient before Covid 19 come in existence	34(68%)	20(40%)
2.	No. of residents who were aware about mechanical ventilator, HFNC, NIV etc.	22(44%)	12(24%)
3	No. of residents did duties in ICU with critical covid pt.	50(100%)	8(16%)
4.	HCW's who touched their face or N95 mask during covid duties	4(8%)	10(20%)
5.	HCW's who took food/water in between duties	2(4%)	6(12%)
6	Which working shift is more comfortable		
	Morning	28(56%)	26(52%)
	Afternoon	10(20%)	6(12%)
	Night	12(24%)	18(36%)
7	Experience after covid duties		
	A. Satisfied	24(48%)	21(42%)
	B like routine duties	10(20%)	11(22%)
	C. burdened	16(32%)	18(36%)
8	No. of residents infected with covid 19 after duty	20(40%)	8(16%)

Graph 2: difficulties while using ppe



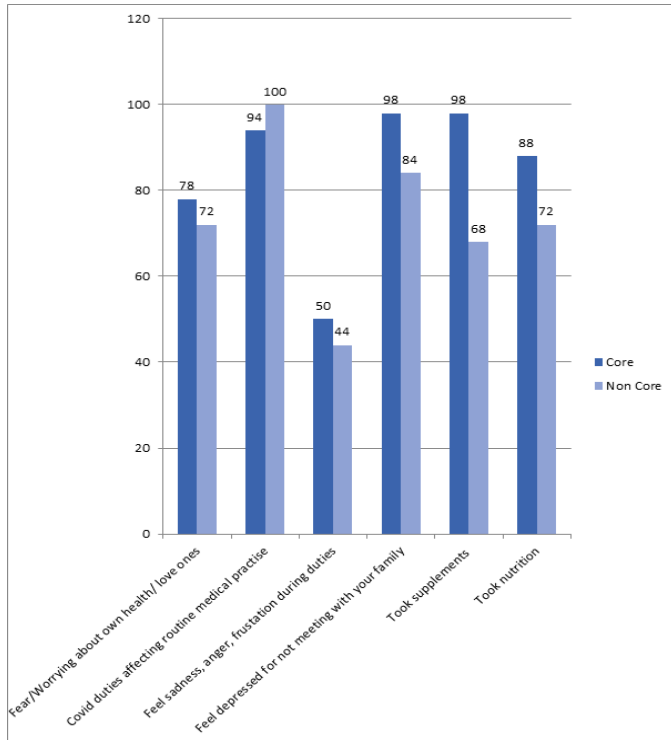
58%, anxiety 86% , worried 28.8% , motivated 33.3% , hopeful 56.7% , ambitious 15.3% , apprehensive and confused 4%.

Among the core residents, 50% experienced anger, frustration and 90% felt depressed to live away from families. 78% felt fear about own health and loved ones. Among non-core residents the biggest threat was that it was affecting there routine medical practice. (Graph 3)

Feeling of Doctors on duty

Doctors expressed different feelings while working during Covid-19 pandemic. Some of these feelings were; Uncertainty and fear 12.6%), depressing circumstances

Graph 3: fears during duty



Discussion

This study enrolled 100 participants and gathered the data of doctors of core and non-core departments working in critical conditions of pandemic. In this study significant number of participants expressed feelings of concern, anxiety, uncertainty and stress similar to other studies done which showed same psychological responses while working in high-risk situations.^[5] In our study age ranged from 23-35 years, 32% male and 68% females. In study done by Kang L et al^[6] 994 participants were taken including 183 (18.4%) doctors and 811 (81.6%) nurses, completed the survey. Among them there were female (85.5%) similar to our study and age ranged 25 to 40 years (63.4%)

COVID-19 is human-to-human transmissible, associated with high morbidity, and potentially fatal may intensify the perception of personal danger.^[7] in our study out of 100 participants, 68% were from core departments and 40% from non-core departments who worked in ICU

settings before covid 19. We found that more than 50% residents felt comfortable in doing morning shift of covid duties and most residents don't prefer afternoon shift and 32% and 36% from core and non-core respectively felt covid duties as burdened. Among the participants 40% from the core and 16% from the non-core residents were infected while working in covid ICU and among them 36% from core residents were symptomatic. we found that the dehydration, sweating and unable to use washroom were the biggest problem among all the residents, while 42% from core and 36% from non-core residents experience hunger and 90% residents were felt suffocation when using PPE kits. Study done by Quin liu et al^[8] on nurse and physician to gather experience during Covid duties and found the same that wearing PPE for long hours led to physical distress, Intensive work for long hours made health-care providers at risk of decreased immunity.

In our study we found that Health care workers felt Uncertainty and fear 12.6%), depressing circumstances 58%, anxiety 86%, worried 28.8%, motivated 33.3%, hopeful 56.7%, ambitious 15.3%, apprehensive and confused 4%. Among the core residents, 50% experienced anger, frustration and 90% felt depressed to live away from families. 78% felt fear about own health and loved ones. Among non-core residents the biggest threat was that it was affecting there routine medical practice A survey conducted in China during the initial outbreak of COVID-19 found that 53.8% of respondents rated the psychological impact of the outbreak as moderate or severe, 16.5% reported moderate to severe depressive symptoms, 28.8% reported moderate to severe anxiety symptoms, and 8.1% reported moderate to severe stress levels.^[9]

Another survey-based study collected demographic data and mental health measurements from 1257 health care workers in China. Of all participant (60.8%) were nurses, and (39.2%) were physicians. (60.5%) worked in hospitals in Wuhan, and 522 (41.5%) were frontline health care workers. A considerable proportion of participants reported symptoms of depression (50.4%), anxiety (44.6%), insomnia (34.0%), and distress (71.5%).^[10]

In a study on 500 health care workers from Singapore, 14.5%, 8.9% and 6.6% participants screened positive for anxiety, depression, and stress respectively, and also and 7.7% were positive for clinical concern of post-traumatic stress disorder.^[11] In study done by Urooj et al ^[12] Fear included, infecting family members 177(79.7%), rapid spread of disease 140(63%), complications of disease 134(60.3%), becoming a carrier in 64(28.8%) and 62(27.9%) feared missing the diagnosis.

Health Care Workers working in emergency departments, intensive care units, and isolation wards had a greater risk of developing adverse psychological outcomes than those of other departments, because they were directly exposed to the infected patients in a highly demanding environment.^[13]

Limitations

This study was conducted during pandemic. There is a need to carry out more studies to explore the working conditions of healthcare workers.

Conclusion

Covid-19 pandemic has raised various challenges all around the world. Our frontline medical staff need to be protected both mentally and physically, which can be achieved by working together as a team and education.

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