

The Mental Health of Doctors during the COVID-19 Pandemic

ABSTRACT

The COVID-19 pandemic poses an unparalleled threat to all human beings; and doctors being frontline warriors; in this battle against the virus; faced unprecedented threats to their own physical and mental health; while performing their duties of caring for and protecting the health of their patients. Many doctors are reluctant to reveal their difficulties even when experiencing significant psychological distress. Hence, there is a need for workplace interventions at our hospitals to decrease the stigma attached to mental health problems and encourage colleagues with psychological difficulties to seek help, when felt necessary. Herein, we study the mental health of doctors; and further try to specifically look out for differences in the mental health between the frontline doctors working in the COVID Care Units (i.e., the COVID Wards, Intensive Care Units) in comparison to the other doctors who work in the non-COVID departments of our institute; which is a tertiary care hospital in Mumbai; and the possible scope for interventions including counseling services for all the doctors in testing times like pandemics.

Key words: COVID-19, Healthcare workers, Mental health, Pandemic

INTRODUCTION

The COVID-19 pandemic posed an unparalleled threat to all human beings; and doctors being frontline warriors; in this battle against the virus; faced unprecedented threats to their own physical and mental health; while performing their duties of caring for and protecting the health of their patients.^[1] Like never before, healthcare workers were under a significant level of psychological stress due to a variety of reasons including the risk of an inadvertent exposure to the virus, an overwhelming workload and unwanted moral dilemmas especially when resources were scarce and more so when our nation was on upsurge of COVID-19 cases. The previous studies have shown that in such testing times doctors themselves are vulnerable to depression, anxiety disorders, post-traumatic stress, and insomnia. Further, a rising caseload coupled with resource limitations and the obviously high patient and patient attendant expectations add to the complexities of the situation.^[2] The stigma of infection and the fear of being an asymptomatic carrier to a loved one at home made the adversities faced by the physicians more significant.^[2] Doctors, experience high levels of work stress even under normal circumstances. But it is also true that many would be reluctant to disclose mental health difficulties or seek help for themselves, with social stigma an often-cited reason.^[3] This coupled with the additional pressure on doctors and on the health-care system in general brings a greater risk of psychological distress for doctors.^[3] Indeed, it has been found that 40% doctors feel their mental health being is more affected now than before the pandemic.^[4] Further, the pandemic having increased the total time at work for the doctors and consequently reduced the total time available to rest and recuperate; has further put them at risk of a mental health problem.^[5]

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Previous studies

A previous study by Chatterjee *et al.* from West Bengal had 152 doctors as participants of which 34.9% were depressed and 39.5% and 32.9% were having anxiety and stress, respectively. In the same study, significant predictors for psychological morbidities included experience in health sector, duty hours, use of protective measures and altruistic coping and most of the factors were found to be significantly associated with depression, anxiety and stress levels.^[1] Another study by Banerjee *et al.* sampled a socio-demographically heterogeneous population of 172 doctors working in COVID-designated centers from all over India. Fear of infection, uncertainty, stigma, guilt, and social isolation emerged as the main challenges faced by doctors in that study.^[2] In that study, the “unmet needs” expressed by doctors included making work related policies more flexible, measures from administrative departments to have better medical protection, more sensitive portrayal of doctors by

media, effective communication of risks to their health and societal inclusion. The doctors had what the authors call a resilience “framework;” which emerged as a process while steering themselves and their patients through adversities and included three facets; primarily forming a “resilient identity” for themselves; then secondarily managing that resilience identity, and finally working through the occupational and social stress. The key coping strategies included the role of mental well-being tasks, social networking among doctors, support from their peer, negotiation through the problems faced, and finally self-care.^[2] In another study, Suryavanshi *et al.* assessed 197 healthcare workers across India with the highest representation i.e. 157 (80%) from Maharashtra. Of these, 130 (66%) were from public hospitals, 47 (24%) were nurses, 66 (34%) were physicians, 101 (52%) were females, and 81 (41%) were ≤30 years. Of these healthcare workers; 87% were directly involved in COVID-19 care; and 43% doctors cared for >10 patients/day.^[6] A large proportion of these healthcare workers reported symptoms of depression, anxiety, and a low quality of life. Single healthcare workers and healthcare workers facing stressors related to work environment were more prone to anxiety and depression.^[6]

Looking at the British Medical Association study, done in October 2020; of the 6550 doctors 43% doctors were experiencing work related depression, anxiety, stress and related mental health conditions which were worse than before the pandemic started.^[4] Specifically comparing the first wave to the second wave in the UK; of 6559 doctors who responded close to 42% doctors report a worse mental health in the second wave of the pandemic when compared to the first wave.^[4] Doctors were also concerned about how the hospital service would cope with the increased work demand from patients in non-COVID care areas which has started during the second wave of the pandemic.^[4]

While, after comparing the mental health outcomes among workers in COVID Care Units (CCU) versus Non-CCU (NCCU) in Belgium, Tietze *et al.* found no difference prevalence of burnout, insomnia, depression, and anxiety between CCU, NCCU workers;^[7] another similar study done by Mishra *et al.* in India revealed significantly high psychological morbidity including sleeplessness, anxiety and depression in the health care workers in working in labor rooms housing COVID patients compared to the other regular labor rooms.^[8]

Taking note of the adverse effect that the pandemic has on the saviors, that is, the doctor; Galbraith *et al* through their write up have urged hospital management authorities and health-care administrations to help doctors and their families during the COVID-19 outbreak and have called for efforts to reduce stigma attached to mental health issues in clinical workplaces. They have thus recommended the addition of ‘healthcare staff mental health support process’ as an ongoing agenda item to high-level management planning meetings.^[3]

Rationale of the study

Healthcare executives, administrators, managers, and most of all doctors themselves should be aware of the potential for the COVID-19 outbreak and such other potential pandemic like situations to elevate the risk of psychological distress in doctors. While healthcare professionals tend to lay more stress on providing training and equipment during pandemics; providing mental health support for clinicians and their families would help protect our doctors against the deleterious psychological outcomes.^[3]

Many doctors are reluctant to reveal their difficulties even when experiencing significant psychological distress. Hence, the need for appropriate changes in hospitals to reduce stigma attached to mental health related problems and promote an environment which would allow doctors to seek mental health related help when required. Mindfulness practice helps in stress reduction at workplace and therefore should be encouraged for groups of doctors or individual clinicians to manage stress during such pandemic outbreaks.^[3]

Hence, there was a need to study the mental health of doctors; and further try to specifically look out for differences in the mental health between the frontline doctors working in the CCU (i.e., the COVID Wards, Intensive Care Units) in comparison to the other doctors who work in the non-COVID departments of our institute; which is a tertiary care hospital in Mumbai and the possible scope for interventions including counseling services for all the doctors in these testing times.

SUBJECTS AND METHODS

Study objectives

The objective of the current study was to study the mental health of all the doctors during the COVID-19 pandemic; and using a comparative study design to look specifically for differences in the mental health between the frontline doctors working in the CCU (i.e., the COVID Wards, Intensive Care Units) - Group A; in comparison to the other doctors who work in the Non-Covid departments of our institute - Group B.

This was done by estimating the level of doctors’ mental health in relation to fatigue from their work, recovery from work related fatigue felt during the time between work shifts and any feelings of depression, anxiety and stress; and further explore the role of demands of work (physical, emotional, mental, and demand related to work timings) and recovery experiences during their off-work hours (whether able to have detachment from work, control their leisure timing effectively and relaxation).

Thus, from point of view of the current study,

Research question 1

How is the doctors’ mental health during the COVID-19 pandemic?

Objective 1

To determine the doctors' mental health during the COVID-19 pandemic.

Research question 2

Do work related demands and experiences during off-duty hours significantly associate with mental health parameters among doctors?

Objective 2

To explore the role of work-related demands and experiences during off-duty hours in the doctors' mental health.

Research question 3

Are there any differences in the mental health between the frontline doctors working in the CCU (i.e., the COVID Wards, Intensive Care Units) in comparison to the other doctors who work in the non-COVID departments?

Objective 3

To look for differences in the mental health between the frontline doctors working in the CCU (i.e., the COVID Wards, Intensive Care Units) in comparison to the other doctors who work in the non-COVID department.

Study hypothesis

In relation to this on the basis of the review of literature; we had 4 hypotheses,

Hypothesis 1

Increase in work demands would increase fatigue, depression, anxiety, and stress.

Hypothesis 2

Increase in work demands would reduce recovery experienced during off-work hours.

Hypothesis 3

Recovery experiences during off-work hours would be better, with reduced fatigue, depression, anxiety, and stress during work.

Hypothesis 4

Recovery experiences felt overall would be better with better recovery during intershift or off-duty recovery.

Hypothesis 5

There would be a significant difference in the mental health between the frontline doctors working in the CCU (i.e., the COVID Wards, Intensive Care Units) - Group A in comparison to the other doctors who work in the non-COVID departments - Group B (both high scores; but Group A higher than Group B).

Study population

For this present study, the target population were all the medical doctors working at our institute which is a tertiary care hospital in Mumbai. The study included resident medical officers, medical officers and specialty consultants. A resident medical officer is a medical doctor undergoing housemanship training. A medical officer is a medical doctor who works as a frontline warrior in the casualty. A specialty consultant is a medical doctor who specializes in a particular medical or surgical specialty.

Inclusion and exclusion criteria

All doctors were included as the study population. No specific exclusion criteria were set. All of them were invited to participate in the study through a WhatsApp message. The link of the questionnaire in the format of a Google Form was sent to them. On receiving and clicking the link, the participants would first be apprised about the information about the study and give an informed consent followed by the demographic details and then questions that they would have to answer.

Instrument/tools

The questionnaire was formed on three sections including background data which included age, gender, department of practice, and specialties (which would eventually divide the doctors into two groups for analysis), duration in health-care, number of patients attended to in a day, and their own comorbidities.

The second section assessed knowledge and attitude regarding COVID-19, vaccination, work demands, fatigue, and recovery assessment and recovery experiences assessment.

In the third section, the Impact of Event Scale (IES) and then the Depression, Anxiety, and Stress Scale (DASS)-21 scales were used.

The DASS-21 is based on three aspects viz. depression, stress, and anxiety, and each aspect contains a total of seven questions. The rating of these DASS aspects, namely, depression, anxiety, and stress are rated as normal, mild, moderate, and extremely severe. Each item is rated in a Likert scale from 0 (didn't apply to me at all) to 3 (much or mostly applied to me); and would be assessed only in the past 1 week.^[7] The DASS scale has previously been found to have a high internal consistency (Cronbach's alpha scores >0.7). The DASS scale has 2 versions, namely, shorter version and longer version (comprising 21 and 42 items, respectively). In DASS-21, the final score of each item is multiplied by two to obtain the final score.^[8-10] In the previous studies on piloting, it has been found that it takes approximately 5 min to complete each such form.^[1]

The IES has 15 questions to determine distress that one associates with a specific event. Developed in 1979 by Mardi

Horowitz, Nancy Wilner, and William Alvarez, the test measures the impact experienced following a traumatic event. IES is a valuable tool to determine trauma and stress. It shows the impact, an event is causing to the person taking the survey at the time of the survey. The IES also detects the most severe impact events, those with the potential of leaving a person with a Post-Traumatic Stress Disorder.^[11]

Our mental health of doctors in the Covid-19 pandemic - questionnaire formulated for our study (November 2021) is as below

Background data

1. Name (Optional):
2. Age:
3. Gender: Male/Female
4. Specialty: Medical and allied/Surgical and Allied/Diagnostic/Administrative (Please name Specialty)
5. Current Position: Consultant/Resident/Casualty Medical Officer/Management or Administrative Staff
6. Have you directly worked or are working in CCU (COVID Wards and COVID ICUs): Yes/No
7. Whether personally having any comorbidities: Yes/No
8. Did you suffer from Covid-19 (Optional): Yes/No

Experiences regarding working as a doctor in the Covid-19 pandemic In the COVID-19 Pandemic:

1. Do you feel proud as a practicing doctor - Yes/No
2. Have you ever been felt ostracized in your residential society for being a doctor who may potentially be exposed to the virus at work - Yes/No
3. Have your work demands increased - Yes/No
4. 3; If yes, do your current work demands increase your levels of fatigue - Yes/No
5. 3; If yes, on holidays, are you still able to experience recovery from your work demands as well as you would during pre-pandemic times - Yes/No
6. Do you think you would recover better with vacation - Yes/No
7. Should all those eligible get vaccinated - Yes/No

Current impact of the stress caused by Covid-19 pandemic

Below is a list of comments made by people after stressful life events. Please mark each item, indicating how frequently these comments were true for you during the past week in relation to the COVID-19 Pandemic (Referred to as "it" in the questions).

If they did not occur during that time, please mark the "not at all" column.

0 - Not at all; 1 - Rarely; 2 - Sometimes; 3 - Often

Select only one answer per row.

1. I thought about it when I didn't mean to.
2. I avoided letting myself get upset when I thought about it or was reminded about it.
3. I tried to remove it from memory
4. I had trouble falling asleep or staying asleep because of pictures or thoughts about it that came to my mind

5. I had waves of strong feelings about it.
6. I had dreams about it.
7. I stayed away from reminders about it.
8. I felt as if it hadn't happened or was unreal.
9. I tried not to talk about it.
10. Pictures about it popped into my mind.
11. Other things kept making me think about it.
12. I was aware that I still had a lot of feelings about it, but I didn't deal with them.
13. I tried not to think about it.
14. Any reminder brought back feelings about it.
15. My feelings about it were kind of numb.

Optional section

You may undertake this section only if specifically feel depressed, anxious or stressed in relation to COVID-19 at present.

Please read each statement and circle a number 0, 1, 2, or 3 which indicates how much the statement applied to you over the past week.

There is no right or wrong answers.

Do not spend too much time on any statement.

The rating scale is as follows:

0 Did not apply to me at all

1. Applied to me to some degree, or some of the time
2. Applied to me to a considerable degree or a good part of time
3. Applied to me very much or most of the time
1. (s) I found it hard to wind down
2. (a) I was aware of dryness of my mouth
3. (d) I couldn't seem to experience any positive feeling at all
4. (a) I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion)
5. (d) I found it difficult to work up the initiative to do things
6. (s) I tended to over-react to situations
7. (a) I experienced trembling (e.g., in the hands)
8. (s) I felt that I was using a lot of nervous energy
9. (a) I was worried about situations in which I might panic and make a fool of myself
10. (d) I felt that I had nothing to look forward to
11. (s) I found myself getting agitated
12. (s) I found it difficult to relax
13. (d) I felt down-hearted and blue
14. (s) I was intolerant of anything that kept me from getting on with what I was doing
15. (a) I felt I was close to panic
16. (d) I was unable to become enthusiastic about anything
17. (d) I felt I wasn't worth much as a person
18. (s) I felt that I was rather touchy
19. (a) I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase and heart missing a beat)
20. (a) I felt scared without any good reason
21. (d) I felt that life was meaningless

DASS-21 Scoring Instructions

The DASS-21 should not be used to replace a face to face clinical interview. If you are experiencing significant emotional difficulties you should contact your GP for a referral to a qualified professional.

Depression, Anxiety and Stress Scale - 21 Items (DASS-21)

The Depression, Anxiety and Stress Scale - 21 Items (DASS-21) is a set of three self-report scales designed to measure the emotional states of depression, anxiety and stress.

Each of the three DASS-21 scales contains 7 items, divided into subscales with similar content. The depression scale assesses dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest / involvement, anhedonia and inertia. The anxiety scale assesses autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. The stress scale is sensitive to levels of chronic non-specific arousal. It assesses difficulty relaxing, nervous arousal, and being easily upset / agitated, irritable / over-reactive and impatient. Scores for depression, anxiety and stress are calculated by summing the scores for the relevant items.

The DASS-21 is based on a dimensional rather than a categorical conception of psychological disorder. The assumption on which the DASS-21 development was based (and which was confirmed by the research data) is that the differences between the depression, anxiety and the stress experienced by normal subjects and clinical populations are essentially differences of degree. The DASS-21 therefore has no direct implications for the allocation of patients to discrete diagnostic categories postulated in classificatory systems such as the DSM and ICD.

Recommended cut-off scores for conventional severity labels (normal, moderate, severe) are as follows:

NB Scores on the DASS-21 will need to be multiplied by 2 to calculate the final score.

	Depression	Anxiety	Stress
Normal	0-9	0-7	0-14
Mild	10-13	8-9	15-18
Moderate	14-20	10-14	19-25
Severe	21-27	15-19	26-33
Extremely Severe	28+	20+	34+

Data analysis

The completed forms were analyzed. While collecting data, doctor’s confidentiality was assured. It was assured to the participants that the interpretation of this study would not be utilized for any financial or commercial purposes. Participants would be allowed to opt out from the study at any time even in the midway of this survey; if they wished to not go ahead. Data were checked for consistency and entered in the computer on Excel data sheets (Microsoft Excel, 2013) for statistical analysis.

The DASS - 21 scores and the IES Scores for the doctors and the mean scores of the two scales for each group (Group A and Group B) were determined and compared with statistical significance determined at $P < 0.05$.

Ethical considerations

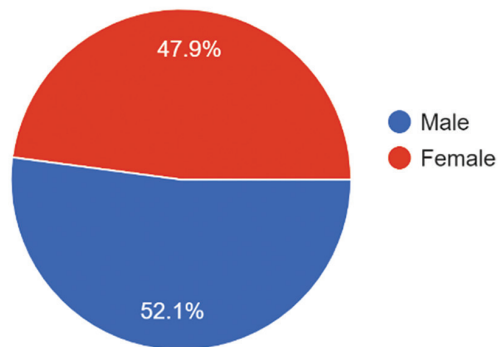
The anonymity of participants (if desired by them) was ensured as we did not collect any identification data. In addition, all participants were allowed to personally contact or be contacted by our psychologist/psychiatrist; if they felt the need for psychological or counseling support during or after the survey.

RESULTS

Gender distribution

A total of 48 doctors took part in the survey. Their age ranged from 25 years to 70 years with a mean age of 43 years. Of the 48 doctors, 25 (52.1%) were male and 23 (47.9%) were female.

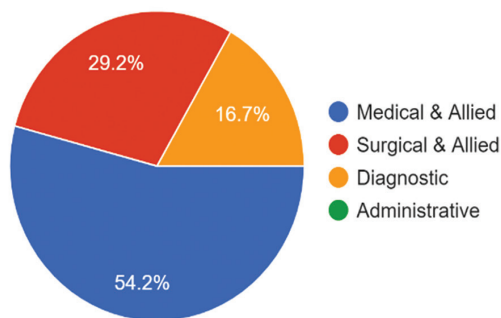
Gender:
48 responses



Consultant versus resident

Of the 48 doctors, 33 were Honorary Consultants/Full Time Consultants and 15 were Resident Doctors. Of them, 26 (54.2%) belonged to medicine and allied specialties; 14 (29.2%) were surgical and allied specialties and 8 (16.7%) were a part of our diagnostic services.

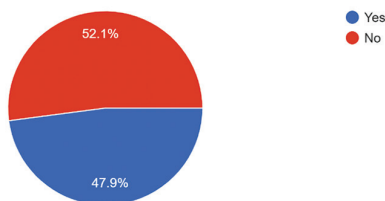
Specialty:
48 responses



COVID versus Non-COVID work

23/48 doctors (47.9%) had directly worked in COVID care units

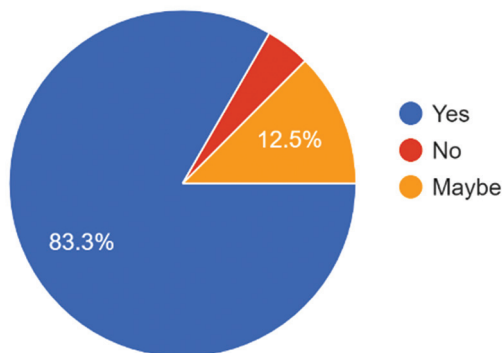
Have you directly worked in Covid Care Units (Covid Wards and Covid ICUs):
48 responses



Pride in being a doctor

An overwhelming 83.3% (40/48 doctors) were proud to be practicing as a doctor during the pandemic times.

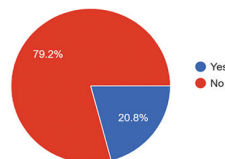
Do you feel proud as a practicing doctor ?
48 responses



Ostracization in residential premises

But, at the same time; 10/48 doctors (20.8%) had felt ostracized in their residential society for being a doctor who could potentially be exposed to the virus at work.

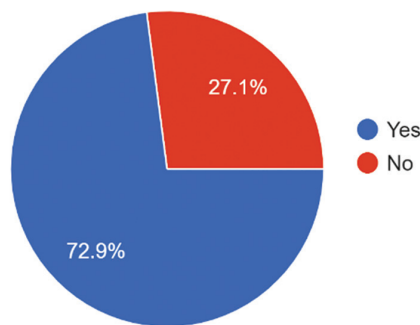
Have you ever felt ostracized in your residential society for being a doctor who may potentially be exposed to the virus at work ? (Optional)
48 responses



Increased work demand

35/48 doctors (72.9%) felt that their work demands had increased in the pandemic.

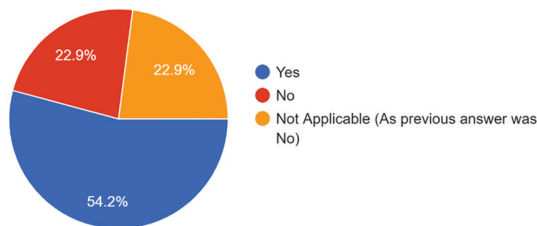
Have your work demands increased ?
48 responses



Increased levels of fatigue

26 of these 35 doctors who felt that their work demands had increased in the pandemic (which is 54.2% of the total 48 doctors) felt that their levels of fatigue had increased because of their increased work demands.

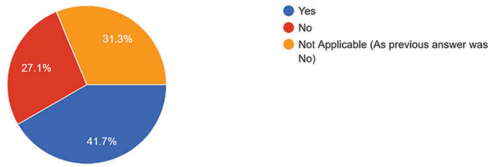
If yes, do your current work demands increase your levels of fatigue ?
48 responses



Recovery from fatigue

13 doctors (27.1%) felt that they could not experience recovery from work demands on holidays during the pandemic; as well as they would during pre-pandemic times.

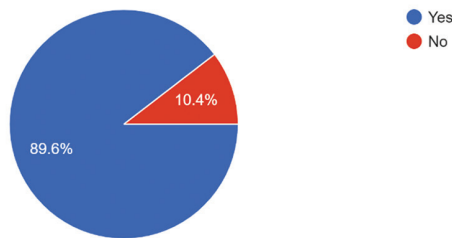
If yes, on holidays, are you still able to experience recovery from your work demands as well as you would during pre-pandemic times ?
48 responses



Need for a vacation

An overwhelming 89.6%, that is, 43/48 doctors felt that they would recover better with a vacation.

Do you think you would recover better with vacation ?
48 responses



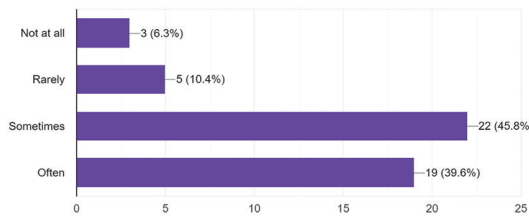
COVID-19 vaccination

With regard to vaccination, all our doctors felt that the eligible should get vaccinated for COVID-19.

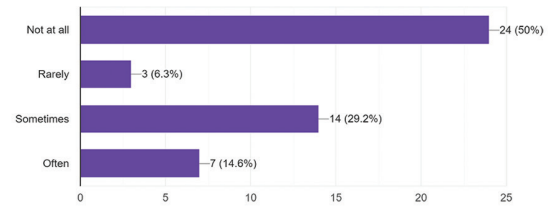
All 48 doctors attempted the 15 questions to assess the impact of COVID-19 using the impact of events scale.

The replies to each of the 15 questions are shown below.

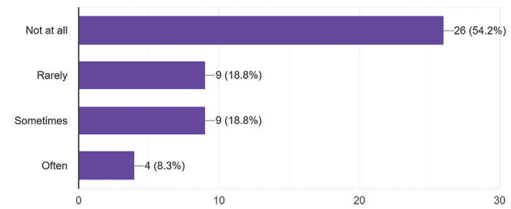
I thought about Covid-19 when I didn't mean to.
48 responses



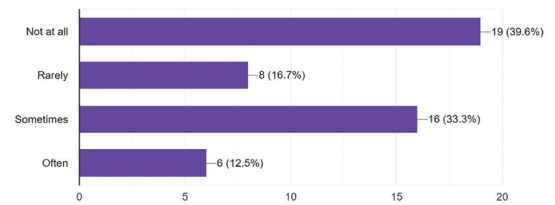
I tried to remove Covid-19 from memory.
48 responses



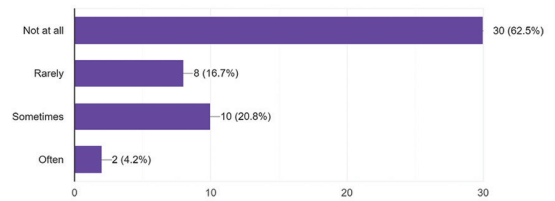
I had trouble falling asleep or staying asleep because of pictures or thoughts about Covid-19 that came to my mind.
48 responses



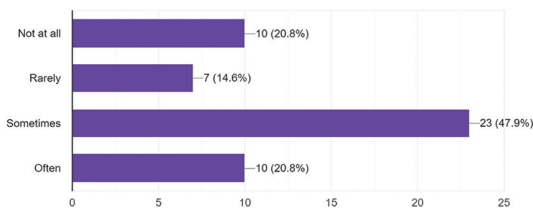
I had waves of strong feelings about Covid-19
48 responses



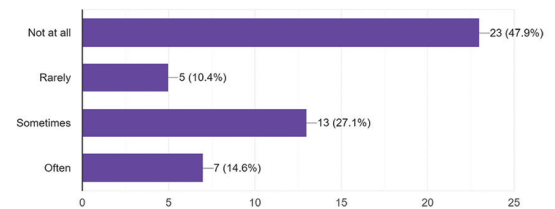
I had dreams about Covid-19 infection.
48 responses



I avoided letting myself get upset when I thought about Covid-19 or was reminded about it
48 responses

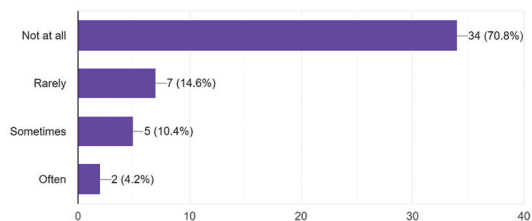


I stayed away from reminders about Covid-19
48 responses



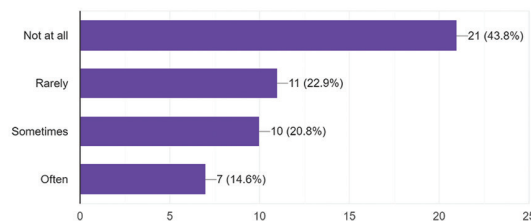
I felt as if Covid-19 Pandemic hadn't happened or was unreal.

48 responses



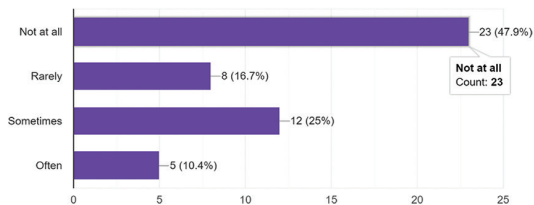
I tried not to think about Covid-19.

48 responses



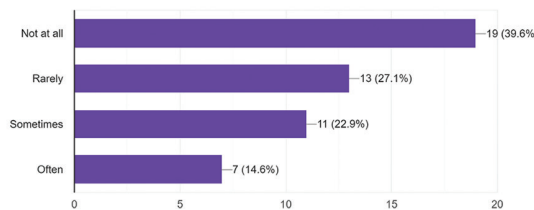
I tried not to talk about Covid-19.

48 responses



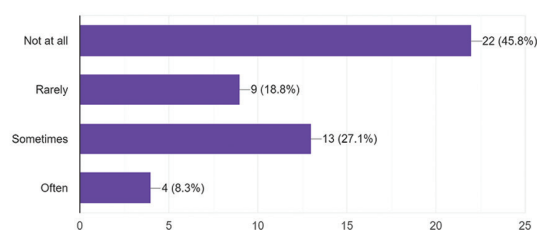
Any reminder brought back negative feelings about Covid-19.

48 responses



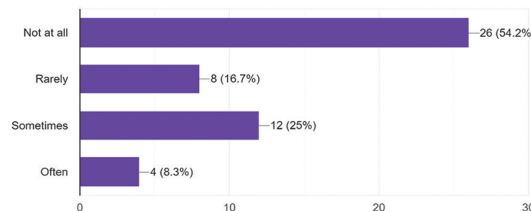
Pictures about anything related to Covid-19 popped into my mind.

48 responses



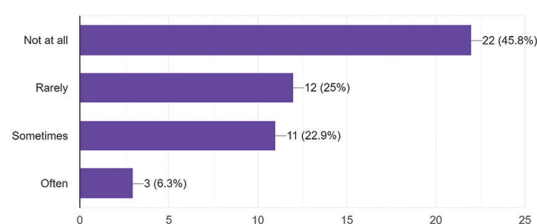
My feelings about Covid-19 were kind of numb.

48 responses



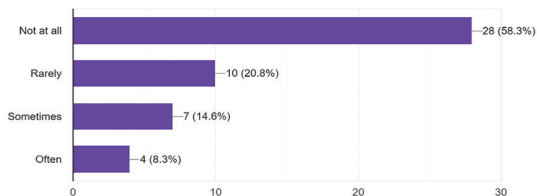
Other unrelated things kept making me think about Covid-19.

48 responses



I am aware that I still have a lot of feelings about Covid-19, that I don't want to express.

48 responses



At the end of the Impact of Events Scale, the doctors were given an option to continue to the next section; which was the DASS Scale only if they specifically felt depressed, anxious, or stressed about COVID-19 pandemic. 33/48 doctors (68.75%) went ahead to answer the questions of the DASS Scale.

Looking specifically at the answers for the Impact of Events Scale and the DASS Scale; and comparing the results of the frontline doctors working in the CCU (i.e., the COVID Wards, Intensive Care Units) - Group A; in comparison to the other doctors who work in the non-COVID departments of our institute - Group B.

Of the 23 doctors who had worked in CCU (Group A) - 2 doctors showed severe impact of event; 7 doctors showed a powerful impact of event; 8 showed some impact of event; and 6 showed no meaningful impact of event.

Of the 25 doctors who had not worked in CCU (Group B) - 6 doctors showed severe impact of event; 4 doctors showed a powerful impact of event; 10 showed some impact of event; and 5 showed no meaningful impact of event.

The mean score of Group A was 21.52 and that of Group B was 24.96 and showed no statistically significant difference.

33 doctors participated in the DASS Scale Survey because they felt that they were depressed, anxious or stressed due to the COVID-19 Pandemic. Of these 33 doctors; 15 had worked in CCU (Group A) and 18 had not worked in CCU (Group B).

For the 7 questions assessing Stress; the average score for Group A was 4 and that for Group B was 7.67; with no statistically significant difference.

For the 7 questions assessing anxiety; the average score for Group A was 4.93 and that for Group B was 2.22; with no statistically significant difference.

For the 7 questions assessing depression; the average score for Group A was 5.47 and that for Group B was 3.17; with no statistically significant difference.

Analysis of results

35/48 doctors (72.9 %) felt that their work demands had increased in the pandemic. 26 of these 35 doctors who felt that their work demands had increased in the pandemic (which is 54.2 % of the total 48 doctors) felt that their levels of fatigue had increased because of their increased work demands. 13 doctors (27.1%) felt that they could not experience recovery from work demands on holidays during the pandemic; as well as they would during pre-pandemic times. An overwhelming 89.6%, that is, 43/48 doctors felt that they would recover better with a vacation. These findings led to us accepting our first 4 hypotheses.

We rejected our 5th hypothesis, as there was no statistically significant difference between the COVID and Non-COVID doctor on comparison with the impact of events scale, and the seven questions each for stress, anxiety, and depression on the DASS Scale.

Having said this, we did find that; of the 23 doctors who had worked in CCU (Group A) - 2 doctors showed severe impact of event; 7 doctors showed a powerful impact of the COVID-19 impact and of the 25 doctors who had not worked in CCU (Group B) - 6 doctors showed severe impact of event; and 4 doctors showed a powerful impact of event of the COVID-19 event.

Thus, 19/48 (45%) had a cognizable, that is, severe or powerful impact of the COVID-19 pandemic.

DISCUSSION

The COVID-19 pandemic is now one of the major calamities of this century, affecting the world. In March 2020, the World Health Organization (WHO) declared it as Public Health Emergency of International Concern (PHEIC), and is now the 6th PHEIC under the International Health Regulations after the previous ones, namely, H1N1 Influenza (2009), Polio (2014), Ebola in West Africa (2014), Zika (2016), and Ebola in the Democratic Republic of Congo (2019).^[12,13] On February 11, 2020, the WHO declared the COVID-19 as “pandemic;” elevating it from its previous status of global health emergency.^[14] From previous experiences, whenever

such situations have arisen, healthcare workers need to and come forward to play a major role, pushing their limits every day. Doctors, being in the frontline of the health-care system, obviously take a large chunk of the brunt. The involved uncertainty; lack of adequate guidelines; a health infrastructure obviously unprepared to deal with a catastrophe of such mammoth proportions; and the fear, anxiety, stigma, prejudice, and marginalization toward the disease, all then complicate the situation.^[1]

Overall, doctors seem to have mental health morbidities which are very less spoken off.^[15] The recent pandemic of COVID-19 has exposed them to higher levels of stress and anxiety which has a detrimental effect on their work output which would obviously have a detrimental effect on health-care delivery to our country.^[16,17] Considering socio-cultural diversities among healthcare workers and their perceived stress levels, it is vital to “hear the unheard voices” of the doctors facing the situation at the frontline and understand that qualitative approaches are better in this situation. Especially while facing situations like pandemics, it is important to understand this term “resilience” and strategies that can be employed used to improve the “resilience” afforded by doctors in such situation.

Doctors who continue to manage hardships and flourish in personal and social lives are considered to be resilient.^[18] Psychological resilience is defined as the ability to cope emotionally with a crisis and return to the pre-critical state. It is said to exist when an individual uses “mental processes and behaviors in promoting personal assets and protecting self from the potential negative effects of stressors.”^[19-21] It is as a “psychological capital” that helps one stride through stressors and losses by the means of humor and hope.

Challenges Faced by the Physicians during the pandemic

One of the major challenges faced is social stigma associated with the disease and avoidance, which have been observed in healthcare since the beginning of the pandemic. Globally, the frontline HCWs have faced “social ostracism,” discrimination and at times restrictions to public resources, and eviction from their apartments.^[3] The general population fearing doctors and avoiding them has been highlighted and is a form of stigmatization.^[22] Such xenophobic sentiments, and social prejudice can be compounded by misinformation related to the spread of infection, suggested remedies, and fear of “accessing health-care facilities.”^[23,24] If faced with such societal attitudes, there can be a self-stigma in physicians, according to the Health-Stigma-Discrimination model, causing self-hate, which reduces interactions, with consequent social exclusion, compounding isolation and resulting in a burnout.^[25] In our study, 10/48 doctors (20.8%) had felt ostracized in their residential society for being a doctor who could potentially be exposed to the virus at work.

Guilt about transferring the infection to their loved ones, physical separation from their loved ones, and existential

crisis including questions about the future of their families are other important challenges faced by doctors.^[2] One of the first studies done on Indian physicians during lockdown has highlighted the role of assurance from administrators, financial security, recognition for their work and a basic understanding afforded by the society at large as important factors that allow and facilitate doctors in coping with these challenges.^[1]

A physician's duty and moral sense of obligation to serve during crisis situation, which provided them with a "moral sense of purpose." Physicians also are known to have an attribute of an enhanced sense of self-esteem and maintain it through self-dialogue which help them manage resilience.^[2] In our study, an overwhelming 83.3% (40/48 doctors) were proud to be practicing as a doctor during the pandemic times.

As shown in literature, most healthcare workers derive hope and gratitude with further help from their own social connections.^[2] This engagement process has been thought to help physicians combat loneliness.^[26] The timeliness of activating these social supports in order to prevent reaching the breaking point has also been highlighted.^[2] Positivism and collectivism are important coping strategies known to help in the reduction of stigma.^[2]

The "gray line" of calculated risk-taking as part of occupational hazards with the strategic precautions, is found to boost medical and emotional security with doctors admitting in previous studies that when "escape from stress" is inevitable, facing the situation augments coping, and avoidance leads to chronicity.^[2] Thus hardships associated with being at work in a pandemic situation help doctors sustain personally and professionally.^[2] Doctors thus retain a positive self-image while facing vulnerabilities and stressors; while falling back for support on a pre-planned support system, through digital modes of communication which include ensuring being in touch with peer groups, pursuing their hobbies and continuing to enjoy the small celebrations.^[2] The previous studies have shown that similar work related groups can deal better during the crisis, which has been obvious by the strength derived by our doctors from peer-support. Thus "the risk with reason" approach helps doctors "work through the distress."^[2] Thus a "careful balance between risk adaptation and medical safety measures" help doctors face the prolonged stress of work during the pandemic.^[2]

It is known and established that healthcare workers experience higher levels of work stress than the general population, even under normal circumstances.^[27,28] Further many doctors find it difficult to tell their colleagues or employers about their mental health difficulties.^[29] This is because of a perceived stigma and anticipated damage to future career prospects.^[30-32]

Thus, many doctors seek help from friends and family than look for psychological/psychiatric consultation.^[30] Furthermore, many doctors do not disclose their mental health problems to their friends and family.^[33]

Research from SARS in 2003, MERS in 2012 and Ebola shows that doctors can feel mental effects that last for many

months after the outbreak.^[34,35] This is also evidenced in our study which was conducted in November 2021; which is 20 months after the outbreak. The negative effects on mental health can be found in doctors even if they have not worked directly with infected patients^[36] and doctors and nurses feel a strong professional obligation to continue working despite the obvious or perceived danger.^[37,38] This makes physicians have a highest risk of 'infectious illness presenteeism' compared to other professions.^[39]

Stress management at the individual level

There is evidence that interventions for work related stress help healthcare professionals.^[40] Mindfulness skills work in high-stress work settings and can be practiced individually or in groups, in almost any setting and for any duration. "Negative automatic cognitions" lead to stress reactions.^[41] And these mindfulness interventions encourage individuals to view their thoughts only as events which are objective. This, then enables them to objectify these negative thoughts, gaining the notion that thoughts influence emotions and behavior and thus facilitating better management of stress accompanying the thoughts.^[41]

The previous studies have shown that of the work demands, mental demands are the topmost and then are the time related demand with the physical demand being the least perceived during the pandemics. In relation to recovery experiences, the topmost recovery experiences are those of control over leisure time, and the least are those related to detachment from work. Both work demands and recovery experiences significantly associate with doctors' mental health in the midst of the COVID-19 pandemic.^[5] More work demands lead to poor mental health which is in sync with the conservation of resources theory.^[42] Doctors with more emotional demand are at a risk of fatigue, poor recovery between work shifts, depression, anxiety, and stress. This is because work demands use up our personal resources such as energy which ultimately leads to adverse mental health.^[42] In our study, 35/48 doctors (72.9 %) felt that their work demands had increased in the pandemic. 26 of these 35 doctors who felt that their work demands had increased in the pandemic (which is 54.2% of the total 48 doctors) felt that their levels of fatigue had increased because of their increased work demands.

As for the recovery experiences, control and relaxation lead to an obvious lower risk of multiple detrimental mental health parameters. In sync with the conservation of resources theory, those with better coping resources, such as better recovery experiences, are able to better conserve and also recover resources which were depleted by work demands in the first place.^[42] In our study, 13 doctors (27.1%) felt that they could not experience recovery from work demands on holidays during the pandemic; as well as they would during pre-pandemic times. An overwhelming 89.6%, that is, 43/48 doctors felt that they would recover better with a vacation.

In literature, it is found that paradoxically being psychological detached from work has an opposite direction of

association with mental health. This is the paradoxical effect of lockdown.^[5] During a “lockdown,” being at work seems to be more desirable and less of a burden compared to being “locked-in” at home due to the freedom it affords. Those with poor mental health tend to detach from their work regardless of place and time. This is because of the “desperation principle” in the conservation of resources theory according to which those who have depleted their personal resources will automatically stop getting involved in the demanding work to restore the same depleted resources.^[42]

A mixed-mode cross-sectional survey aimed to evaluate differences in the mental health workers in COVID versus non-COVID work stations found that the mental health outcomes did not seem to be associated with directly dealing with COVID-19 patients.^[7] However, in other studies^[8] prevalence of sleeplessness in healthcare workers in COVID labor room was found to be 57%, which was significantly high, as compared to non-COVID labor room. This has been hypothesized to pandemic-related stress induced activation of the hypothalamus-pituitary-adrenal system, which is not compatible with a regular sleep cycle which ultimately forms a vicious cycle resulting in sleep disorders.^[8] In the same study, depression was prevalent in 92% of healthcare workers in COVID labor rooms as against 12.5% in non-COVID labor room.^[8]

In our study, there was no statistically significant difference between the COVID and non-COVID doctor on comparison with the impact of events scale, and the seven questions each for stress, anxiety, and depression on the DASS Scale.

Having said this, we did find that; of the 23 doctors who had worked in CCU (Group A)-2 doctors showed severe impact of event; 7 doctors showed a powerful impact of the COVID-19 impact and of the 25 doctors who had not worked in CCU (Group B)-6 doctors showed severe impact of event; 4 doctors showed a powerful impact of event of the COVID-19 event.

Thus, 19/48 (45 %) had a cognizable, that is, severe or powerful impact of the COVID-19 pandemic.

IMPLICATIONS, FUTURE DIRECTIONS, AND CONCLUSIONS

Nonetheless, we safely conclude that healthcare administrators should be aware of the risk of psychological distress in doctors during pandemic states.

Literature shows that, although we all lay higher value on training and equipment during pandemics; psychological support for healthcare workers and their families is of paramount importance to avert negative psychological outcomes.

Doctors are known to be reluctant to reveal their difficulties even when experiencing significant psychological distress. In our study, we found that 45% of the doctors had a severe or powerful impact of the COVID-19 pandemic and this was irrespective of their working in COVID or non-COVID settings.

This highlights the need for workplace interventions that decrease stigma in relation to mental health problems and increase care and support among colleagues with psychological difficulties; leading to help seeking behavior among doctors.

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