Impact of Covid-19 Pandemic on Mental Health of Healthcare Workers in India: A Questionnaire Based Study

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ABSTRACT

Introduction: Healthcare workers across the globe are working tirelessly to keep the severity under control. The long working hours wearing PPE, the self-quarantine periods, staying away from family, and various other factors does influence the mental wellbeing of an individual. In a country like India mental health is still a poorly recognised issue even among healthcare professionals. Objective: To assess the stress, anxiety and depression among healthcare professionals at the time of Coronavirus pandemic and estimating the same in Anaesthesiology Cohort.

Material & Methods: The study was conducted using a self-reporting questionnaire. The questionnaire was made using Google forms and the link for participation was sent using various digital mediums e.g., email, WhatsApp, Facebook. The questionnaire was sent to a total of 886 doctors and there was a total of 256 responses were received. The questionnaire was submitted anonymously and no personal data was collected. The respondents were allowed to submit only once to prevent duplicity of response. We used the DASS 21 scale as the assessment tool. Data was collected using google forms and the collected data was transferred to a Microsoft Excel sheet for analysis.

Result: Our study on 256 doctors 40.75% doctors were found to be suffering from Depression, 38.29% from anxiety & 32.4% from stress in the current pandemic situation. Anaesthesiologists were found to have 30.29% depression; Anxiety was found among 42.56% and stress was found among 37.24%.

Conclusion: Stressors, like gruelling shifts, risk of infections, non-availability of protective kits, health risk to family and friends etc, are many and respite seems to be far. We need to address and acknowledge the mental health of healthcare workers and people working in critical care into consideration and find solutions to the underlying causes so that the current and future of the healthcare can be saved from mental health crisis.

KEYWORDS: Depression, Anxiety, Stress, Doctors, Anaesthesiologists. Covid-19.
miniscule compared to the COVID 19. Healthcare workers across the globe are working tirelessly to keep the severity under control. The long working hours wearing PPE, the self-quarantine period of 14 days, staying away from family, and various other factors does influence the mental wellbeing of an individual. In a country like India mental health is still a poorly recognised issue even among healthcare professionals. There has been a case of suspected suicide by a post graduate student posted in COVID 19 hospital and the doctor was suffering from depression. It is of utmost importance that regular assessment of the mental status of healthcare professionals is made for optimal performance of these professionals in these trying times. Apart from mental health still being a taboo in our society, its expanse in unprecedented situation like a pandemic is very crucial. Literature in Indian society is very sparse. Aim of the study : To assess the stress, anxiety and depression among healthcare professionals at the time of Coronavirus pandemic and estimating the same in Anaesthesiology Cohort.

METHODS

The study was conducted in the month of April & May 2020 using a self-reporting questionnaire. This was a cross-sectional study done on Indian Healthcare workers to study the prevalence of Mental stress among them. To avoid physical contact and maintain social distancing norm, this study was done via online platform. The questionnaire, which included demographic profiles (age, gender, branch of specialization, type of duties, marital status) and Depression, Anxiety & Stress scale (DASS-21) was made using Google forms and the link for participation was sent using various digital mediums e.g., email, WhatsApp, Facebook. The questionnaire was sent to a total of 886 doctors and there was a total of 256 responses received. The questionnaire was submitted anonymously with no personal data that was collected to avoid bias. Purpose of the study was explained and participants were given the freedom to choose to participate in the study. Consent for study was taken. Respondents were allowed to submit only once to prevent duplicity of response. Doctors having any prior mental or acute physical sickness were excluded from the study. Doctors working in India were sent emails and WhatsApp irrespective of age, gender and place. Data was collected using Google forms and the collected data was transferred to a Microsoft Excel sheet for analysis. Data was analysed using Microsoft Excel. The questionnaire was sent to 386 contacts by WhatsApp direct message and emailed to 276 doctors. We further asked to share the questionnaire among peers. Total responses we received were 204. Now there can be many factors for the low response we got. Doctors have been receiving a lot of mails inviting to webinars, fill up surveys which dilutes the attention and response. Even the stress related to Covid-19 duties takes a toll on most of the healthcare workers. The link was open for 1 month.

RESULT

256 doctors have participated in this study. 63 are MBBS doctors, 152 are MD/MS and 41 are super specialists. Out of these 94 were anaesthesiologists and rest of them included 8 paediatricians, 2 radiologists, 6 orthopaedic surgeons, 9 Pulmonary Medicine, 14 general surgery, 20 general medicine, 18 OB/G, 18 community medicine, 7 Ophthalmologists, Microbiology 3, Pathologists 6, Physiology 12, Anatomy 2, Neuro Surgery 2, Neurology: 4 and rest were MBBS (63). Out of 256 doctors 139 (54.29%) are working in private sector, 52(20.31%) are in government sector, 43 (16.79%) are Post graduate students and 22 are self-employed (8.5%). During data collection, 170 doctors were doing non-Covid routine duties (66.4%), 40 doctors were posted in Active Covid duties (15.6%) and 56 doctors were expecting Covid duties ahead (21.8%). Table 1 shows the age distribution.

| Age in years | Number of doctors |
|--------------|-------------------|
| 25-35        | 148               |
| 35-45        | 74                |
| 45-55        | 24                |
| >55          | 10                |
| Total        | 256               |

Figure 1 shows sex distribution:

Out of all participants 164 were male and & 92 were Females

Depression, Anxiety and Stress:

Table – 2  ➔  Depression: In our study we found 152 respondents to be within Normal range, 48 were having mild depression, 32 were moderately depressed, 8 had severe depression and 16 were suffering from very severe depression.

| Depression Score | Normal | Mild | Moderate | Severe | Extremely severe | Total | Percent |
|------------------|--------|------|----------|--------|-----------------|-------|---------|
| Number(204)      | 100    | 40   | 16       | 0      | 4               | 152   | 59.37%  |

Table 3  ➔  Anxiety: 158 responders were within normal range for anxiety, 18 were having mild anxiety, 49 showed moderate anxiety levels, 18 were suffering from...
severe anxiety and 13 were suffering from extremely severe anxiety.

Table 3: Distribution of doctors using DASS score for Anxiety (Normal-0-6, Mild - 7-9, Moderate - 10-14, Severe-15-19, Extremely severe - 20-42).

| Anxiety   | Males | Females | Total | Percent |
|-----------|-------|---------|-------|---------|
| Normal    | 112   | 46      | 158   | 61.71%  |
| Mild      | 12    | 6       | 18    | 7.03%   |
| Moderate  | 8     | 41      | 49    | 19.14%  |
| Severe    | 12    | 6       | 18    | 7.03%   |
| Extremely severe | 5     | 8       | 13    | 5.07%   |

Table 4: Distribution of doctors using DASS score for Stress (Normal-0-10, Mild - 11-18, Moderate - 19-26, Severe-27-34, Extremely severe - 35-42).

| Stress   | Males | Females | Total | Percent |
|----------|-------|---------|-------|---------|
| Normal   | 120   | 53      | 173   | 67.57%  |
| Mild     | 13    | 31      | 44    | 17.18%  |
| Moderate | 2     | 11      | 13    | 5.07%   |
| Severe   | 2     | 15      | 17    | 6.64%   |
| Extremely severe | 3     | 6       | 9     | 3.51%   |

Table 5: DASS score (for Depression, Anxiety and Stress) among Anaesthesiologists.

|                  | Normal |          |          |
|------------------|--------|----------|----------|
| Depression       | 65(69.74%) | 16(17.02%) | 8 (8.51%) |
| Anxiety          | 54(57.44%) | 10(10.63%) | 21 (22.34%) |
| Stress           | 59 (62.76%) | 11 (11.7%) | 18 (19.14%) |

Anaesthesiologists were found to have 30.29% depression; Anxiety was found among 42.56% and stress was found among 37.24%.

DISCUSSION

Previous researchers had found that healthcare workers live and work under higher stress and psychological distress compared to other professions, even under normal circumstances (1,2). In a pandemic, especially when the threat is enormous and treatment hazy, strain on healthcare personnel increases manifold. Additionally, doctors at the risk of getting infected themselves or infecting their family or loved ones while catering to the affected or patients with unknown status.[3,4] Anaesthesiologists have a highly stressful job profile owing the need for sustained vigilance, unpredictability of work, fear of litigation, competence, grave outcomes, dealing with serious patients in ICU and production pressure.[4,5] Extreme stress among critical care specialists may lead to physical and emotional exhaustion and burnout which can be very deterrent in the long run.

In the current Covid-19 pandemic, our study found 40.75% doctors were suffering from Depression, 38.29% were suffering from anxiety & 32.4% were suffering from stress. Study done by SS Chatterjee found 34.9% were having anxiety and 32.4% were suffering from stress in the normal circumstances which was found to be 30.1% depression and 16.7% doctors had showed suicidal ideation [11]. Wang C et al., reported moderate to severe anxiety symptoms in 28.8% healthcare workers and 8.1% reported moderate to severe stress levels.[12] We found 30.29% anaesthesiologists to have depression, 42.56% having anxiety and 37.24% having stress. Though the depression level is found to be considerably lower than the other healthcare workers but anxiety and stress are higher by 4.27% and 4.81% respectively. Studies have found that under these outbreak condition surgeons, anaesthesiologists are having higher risks than under non-pandemic conditions. [13,14].

Earlier studies addressing the prevalence of depression among doctors during an epidemic have reported a rate of 26.6%. [10] Studies done in India showed even higher prevalence of depression and stress under normal circumstances which was found to be 30.1 % depression and 16.7% doctors had showed suicidal ideation [11]. Wang C et al., reported moderate to severe anxiety symptoms in 28.8% healthcare workers and 8.1% reported moderate to severe stress levels.[12] We found 30.29% anaesthesiologists to have depression, 42.56% having anxiety and 37.24% having stress. Though the depression level is found to be considerably lower than the other healthcare workers but anxiety and stress are higher by 4.27% and 4.81% respectively. Studies have found that under these outbreak condition surgeons, anaesthesiologists are having higher risks than under non-pandemic conditions. [13,14].

Non-standard work hours have been proved to be associated with several chronic outcomes. There is evidence linking shift work to breast cancer and long work hours to stroke. [15] Current health crisis has increased the risks of uncertainty even more, which may lead to graver consequences in future.

We have used DASS-21 questionnaire as our tool which is considered to be a valid tool for assessment of psychological factors such as depression, anxiety and stress. [16,17]

LIMITATIONS: this study was conducted by online platforms hence the response rate was less. A larger study population with equal representation from all specialities is needed to have a more comprehensive idea about the mental health during Covid-19. The contributing factors needs to be assessed to go to the bottom of the causes behind such implications.

CONCLUSION – In our study on 256 doctors we found 40.75% doctors were suffering from Depression, 38.29% were suffering from anxiety & 32.4% from stress in the...
current pandemic situation. Anaesthesiologists were found to have 30.29% depression; Anxiety was found among 42.56% and stress was found among 37.24%.

**SUMMARY-** As our study reveals, more awareness and prompt screening should be there among doctor community and further long-term planning and risk assessment should be there. Adverse mental health condition will not only affect their service delivery and patient service but it might affect their family and society at large in the long run. Proper measures should be planned and taken into account to reduce the longer duty hours, uncertainty, exhaustion and burnout. As the COVID-19 epidemic continues to sweep and respite nowhere in sight, our findings will be pertinent for the planning and development of inclusive psychological support, identification and treatment for long term benefits in a developing country like India where mental health still remains unaddressed.

**AUTHORS’ CONTRIBUTIONS**
The participation of each author corresponds to the criteria of authorship and contributorship emphasized in the Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly work in Medical Journals of the International Committee of Medical Journal Editors. Indeed, all the authors have actively participated in the redaction, the revision of the manuscript and provided approval for this final revised version.

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**STATEMENT OF ETHICS**
The authors have no ethical conflicts to disclose.

**DISCLOSURE STATEMENT**
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