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Original Article

Health Management and Policy Section

# Questionnaire Based Study to Explore the Barriers of Willingness and Ability to Work among Indian Doctors during Initial Phase of COVID-19 Pandemic

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## ABSTRACT

**Introduction:** Numerous doctors have been infected while treating the patients of Coronavirus Disease (COVID-2019). Expecting doctors to treat without any regard to their safety is an extreme and unrealistic approach. Apart from professional obligations, doctors have personal obligations to their families too.

**Aim:** To understand the barriers of willingness and ability to serve during pandemics for Indian doctors.

**Materials and Methods:** In this cross-sectional study, Peer-tested web-based questionnaire, along with informed consent form incorporated into Google form, was posted on a WhatsApp group. Study was conducted from April 2020 to June 2020. The group included 400 Indian medical practitioners, selected randomly. It comprised of total 49 questions, including open and close ended type, in English language. Out of these, 14 questions were pertaining to the present study. The exploratory data analysis was used to analyse and interpret the data.

**Results:** Responses were submitted by 256 doctors (64% response rate) out of which 121 were from males, 134 from females and 1 person preferred not to disclose the gender. Majority (64.8%) of the responses were obtained from doctors in age group of 20-40 years and 49% of the total responses were from faculty in government medical college. It was revealed that 9% doctors were willing to quit medical profession and 23%doctors preferred not to serve patients during pandemic of contagious disease. As many as 58.6% expressed that incidences of doctors facing public harassments abuse and social discrimination dissuaded them from serving COVID-19 patients. A 59.4% and 58.2% of doctors had responsibility of child-care and elderly-care respectively which was acting barrier to ability to serve during the pandemic. As many as 49.2% brought it to light that the infrastructure at their workplace was not up to the mark to deal with COVID-19 patients.

**Conclusion:** This study has brought into light that fear of contracting the disease due to lack of Personal Protective Equipment (PPE), risking one's family for getting infected, responsibility of child-care and elderly-care along with social ostracism as untouchables are the major deterrents for willingness to work. Distance from workplace, one's illness and lack of proper infrastructure at workplace are barriers to ability to work during COVID-19 for Indian doctors.


**Keywords:** Child-care, Coronavirus Disease-2019, Contagious, Elderly care, Infrastructure, Public harassment

## INTRODUCTION

It is time to appreciate the excruciatingly hard work of doctors throughout the pandemic for welfare of the society. Numerous doctors and healthcare workers have been infected with the virus while treating the patients. Apart from professional obligations, doctors have personal obligations for their families too. These are reasonable thoughts which can act as barriers to willingness to work during pandemics. At the same time there are factors acting as barriers to ability of doctors to serve. Ability refers to the capability of the individual to report to work, whereas willingness refers to a personal decision to report to work [1].

Various studies have revealed that the fear of getting infected with novel agents may result in absenteeism of healthcare workers to extent of 35-55% [2-5]. In past, it has been observed that peak workplace absenteeism was correlated with the highest occurrence of both influenza-like illness and influenza-positive laboratory tests [6]. In yet another study, 16% of the workers were unwilling to respond to a pandemic flu emergency regardless of its severity [7]. In a study, a sample of healthcare workers said that they would abandon their workplace during a pandemic for protection of themselves and their families [8].

The major factors acting as barriers to willingness during pandemics have been stated as fear of contracting an illness [3,7], occurrence of both pandemic-like illness and pandemic-positive laboratory tests [6], responsibility of child-care [8], lack of experience in handling similar pandemics and low perceived level of hospital preparedness [9]. The present study would lead to find implications for planning and policy making by stakeholders and utilise our limited resources to the best. As during the pandemic, social distancing norms hamper conventional methods of data collection, Indian Council of Medical Research (ICMR) has approved online surveys as an acceptable method of data collection [10], So we decided to carry out a web-based questionnaire study to explore the working scenario of doctors in India during the early phase.

The part of the study containing data on information about the pandemic itself that the doctors had, their working conditions; status of running Outpatient Departments (OPDs), training in protective equipment and infection control for COVID-19, health insurance plan nor any security against the incidences of doctors getting assaulted by patients of COVID-19 and their attendants provided by their institute or state government and mental distress during early phase of the pandemic has been accepted for publication elsewhere [11]. The present study helps us to understand the barriers to willingness and ability to serve during pandemics for Indian doctors.

## MATERIALS AND METHODS

A cross-sectional study was carried out at the King George Medical University, Lucknow, over a period from April 2020 to June 2020.

The study was approved by the Institutional Ethics Committee of King George Medical University (Registration No.: ECR/262/Inst/UP/2013/RR-19). The reference code for the present study was 101st ECM IB/P6).

**Inclusion criteria:** It comprised of doctors, with at least MBBS degree, working in clinical as well as non-clinical department, including faculty in medical colleges, junior doctors and general practitioners

**Exclusion criteria:** Those denying consent were excluded from the study.

**Sample size calculation:** Using the manual for sample size calculation by World Health Organisation (WHO), considering anticipated population proportion for each item to be 50%, confidence level of 95% and absolute precision of 10 percentage points, the sample size for the present study was calculated as 96 [12]. Literature was searched to find the response rate of health professionals to online surveys. Previous studies [13-15] revealed that the response rate of health professionals varied between 9 to 94%. Anticipating low response rate due to lack of time and survey burden on doctors, the final sample size was calculated as 400.

### Questionnaire

It was a web-based questionnaire study exploring the working scenario of doctors during COVID-19 pandemic in India. The web-based questionnaire was designed and administered as pilot survey to five faculty in Department of Pharmacology, KGMU to check the appropriateness of questions and to remove errors. Suggested changes were incorporated. Then along with informed consent form, it was incorporated into a Google form.

The questionnaire was self-administered and semi-structured comprising of total 49 items to assess demographic information, awareness regarding COVID-19 and working conditions of physicians during the initial phase of the present pandemic. Out of these, 14 questions were pertaining to the present study. The questions were framed based on previous studies [16-18].

The survey questions had response option either yes/no or a 5-point Likert-type scale or a short comment. The survey was open from 16th April 2020 to 15th June 2020. The respondents could open the google form at a single click on the link provided and only single response was accepted. No personal information like name, email id or phone number was asked from the respondents as well as none other than the investigator was permitted to see the individual responses to maintain the confidentiality of identity and responses of doctors throughout the study. A WhatsApp group called 'Doctors during COVID-19' dedicated to this study was formed. It comprised of 400 doctors and residents randomly selected from various national groups. The link for google form was shared in this group.

## STATISTICAL ANALYSIS

The data was collected and analysed through Microsoft (MS)-Excel 2016. The data was cleaned by removing outliers in the study. The exploratory data analysis was used to analyse and interpret the data.

## RESULTS

The number of participants who gave consent and submitted their response was 256 (response rate=64%). [Table/Fig-1] indicates demographic characteristics of the participants. It indicates that greater number of responses was obtained from female doctors (52.3%) as compared to males (47.3%). Further maximum participants were in age group of 20 to 40 years.

[Table/Fig-2] indicates the profession of participants. It is observed that majority of responses (47.7%, n=122) were obtained from faculty working solely in government medical colleges in clinical and non-clinical branches. [Tables/Fig-3a-c] present the responses of participants as yes/no, true/false, likert scale from strongly agree to strongly disagree and short answers to open-ended questions respectively to various questions pertaining to willingness and ability to work during the COVID-19 pandemic. [Table/Fig-3a] indicates responsibility of participants for child-care or elderly-care. It also shows that as many as 49.2% of the participants felt that infrastructure at their place was not upto the mark to deal with COVID-19 patients. [Table/Fig-3b] throws light on the facts

| Demographic parameters | Number of participants (%) (N=256) |
|---|---|
| **Gender** | |
| Female | 134 (52.3%) |
| Male | 121 (47.3%) |
| Prefer not to say | 1 (0.4%) |
| **Age** | |
| 20-40 years | 166 (64.8%) |
| 41-60 years | 78 (30.5%) |
| 61-80 years | 12 (4.7%) |

**[Table/Fig-1]:** Demographic characteristics of the participants.

| Workplace and profession | Number of Participants (%) (N=256) |
|---|---|
| **Faculty** | |
| In a Government medical college (Clinical department) | 53 (20.7%) |
| In a Government medical college (Non-Clinical department) | 69 (27%) |
| In a Government medical college (Non-Clinical department), General Practitioner in Private set-up | 1 (0.4%) |
| In a Private medical college (Clinical department) | 7 (2.7%) |
| In a Private medical college (Non-Clinical department) | 45 (17.6%) |
| **General practitioner** | |
| In Government as well as Private set-up | 1 (0.4%) |
| In Government set-up | 13 (5.1%) |
| In Private set-up | 17 (6.6%) |
| **Resident doctor** | |
| In a Private medical college (Clinical department) | 18 (7%) |
| In a Government medical college (Clinical department) | 4 (1.6%) |
| In a Government medical college (Non-Clinical department) | 24 (9.4%) |
| In a Government medical college (Non-Clinical department), General Practitioner in Government set-up | 1 (0.4%) |
| In a Private medical college (Non-Clinical department) | 3 (1.2%) |

**[Table/Fig-2]:** Profession of the participants.

| Questions | Responses {Yes (%)} N=256 |
|---|---|
| Do you have responsibility of child-care which is barrier to your willingness? | 152 (59.4) |
| Do you have responsibility of elderly-care which is barrier to your willingness? | 149 (58.2) |
| The distance from my home to workplace is too much. I usually take services of public vehicles. But during the condition of Lockdown, I am finding it difficult to attend to my duty. | 65 (25.4) |
| I want to work as COVID-19 health-worker. But I am living in a rented house and fear to be dislodged by my landlord for doing so. | 55 (21.5) |
| I want to work as COVID-19 health-worker. But my medical illness does not allow me to do so. | 59 (23.04) |
| I want to work as COVID-19 health-worker. But the infrastructure at my workplace is not up to the mark to deal with such patients. | 126 (49.2) |

**[Table/Fig-3]:** Responses of participants-I, II.

| Question | Strongly agree | Agree | Neutral | Disagree | Strongly disagree |
|---|---|---|---|---|---|
| I had little thought regarding the work-related risks and morbidity of medical profession. Serving the patients of contagious diseases like the present pandemic is a potential risk to my health. If permitted, I will quit from this profession. | 10 (3.9%) | 13 (5.1%) | 44(17.2%) | 123 (48%) | 66(25.8%) |
| I keep my family first. It is unacceptable to put my family to risk of contracting the disease from me. So, if permitted, I will prefer not to serve patients during pandemic of contagious disease. | 17 (6.6%) | 42(16.4%) | 54(21.1%) | 103(40.2%) | 40(15.6%) |
| Recently, there have been incidences of doctors facing public harassments for the fear of transmitting disease from patients to them. Doctors have been abused and socially discriminated. Such scenario dissuades me from serving COVID-19 patients. | 76(29.7%) | 74(28.9%) | 33(12.9%) | 52(20.3%) | 21(8.2%) |

**[Table/Fig-3b]:** Responses of participants on fear of risk.

that 9% of the participant doctors were willing to quit the medical profession out of fear of risking their health and as many as 58.6% participants agreed that scenarios of doctors being abused and socially discriminated dissuades them from serving COVID-19 patients. [Table/Fig-3c] contains suggestions of participants for the stakeholders that might help them to overcome their unwillingness to work during a pandemic of contagious disease. Apart from that, it also brings forth factors acting as barrier to their ability to work in spite of willingness.

| Open-ended Questions | |
|---|---|
| Kindly share your suggestions for the stakeholders that might help you to overcome your unwillingness to work during a pandemic of contagious disease. | ✓ Facilitating childcare while I am on duty. Proper care of family members<br>✓ Provide more protective measures and special training during epidemic.<br>✓ The risks born by doctors should be equally rewarded in form of salary, recognition, perks and facilities.<br>✓ Health insurance must be ensured<br>✓ Take consent before posting in COVID ward.<br>✓ Involvement of bureaucrats should be less in medical field.<br>✓ Better residential facilities. Better security.<br>✓ Public awareness should be increased.<br>✓ Strict legal actions need to be taken against those who assault healthcare workers.<br>✓ Working area must be sanitised regularly.<br>✓ To avoid rumours<br>✓ Basic requirements food and residential quarter facility should be provided to all doctors |
| Any other aspect you would like to share which is acting as barrier to your ability to work in spite of willingness. | ✓ Mismanagement and improper infrastructure and improper working protocol is the biggest barrier.<br>✓ The activities of particular community patients who are tested positive. They are acting like human bombs.<br>✓ Family issues like elderly members who are diabetic and chronic cardiac illnesses. They are at risk of COVID-19 infection.<br>✓ Ensure adequate isolation and quarantine facilities for the healthcare workers away from their family to keep them safe.<br>✓ Fear psychosis in the society<br>✓ Avoid red tapism, that is excessive paperwork before providing treatment to COVID patients should be avoided<br>✓ Doctors put their best of efforts in managing patients. So, they should not be blamed in case a patient succumbs.<br>✓ Pregnant state of female doctors.<br>✓ Studies are hampered which will be hazardous to my future career.<br>✓ Lack of proper training for managing COVID-19 patients.<br>✓ Domestic help unavailable. |

**[Table/Fig-3c]:** Responses of doctors to open ended questions.

## DISCUSSION

It has been reported earlier that disasters which involve any contagion, influence the number of health care employees reporting for duty [19]. Healthcare workers' attitudes to working during pandemic influenza have been studied in order to identify factors that might influence their willingness and ability to work. The perceived barriers to the willingness to work of healthcare workers included prioritising the wellbeing of family members and concern for self [20].

It has been documented during earlier pandemics that the willingness has been as less as 48.4% and ability to work reduced to 63.5% [1]. The results of the present study are in line with the above- 23.8% doctors preferred not to deal with patients and 10.2% were even ready to quit the profession, if permitted so.

In view of the above studies, it becomes an established fact that healthcare workers are unwilling to serve during a pandemic. Now, we need to find the factors determining such unwillingness which will help to manage such medical emergencies in future. WHO modelling of Personal Protective Equipment (PPE) for healthcare professionals had estimated that 89 million medical masks, 76 million gloves, 1·6 million goggles and 30 million gowns are required for the COVID-19 response each month [21]. But in India, there had been news of inadequate supply of PPE during the early phase [22]. It has been indicated in earlier study that the provision of adequate PPE increased willingness of employees to work during healthcare emergencies [23]. Hence, it is strongly recommended that adequate supply of PPE must be available at all times to combat such emergency situations in future. This would mitigate the fear of doctors of getting self-infected or infecting their families.

Secondly, the doctors feared of infecting their families. To meet this deterrent, accommodation with proper food and lodging should be provided to doctors near the workplace. It will help them to work without fear of infecting their families. In the present study, 21.7% expressed that they lived in rented house and feared to be dislodged by the landlords and 25.6% doctors found it difficult to attend to their duties during the lockdown due to lack of availability of conveyance to workplace. These barriers to ability to work will also be overcome with availability of such accommodations for the serving doctors.

Unexpectedly several incidences of violence against doctors had been reported by doctors [24,25]. Such violence was attributed to a mix of ignorance and fear amidst people, which is amplified by the pandemic [26,27]. It was in news that two trainee doctors in New Delhi were allegedly assaulted by a neighbour and the burial of a neurosurgeon who had died after contracting COVID-19 in Chennai was disrupted by a mob [28]. Several reports of doctors being spat on, hurled abuses at and driven away poured in [29]. People panicked so much about catching COVID-19 from health care workers that they labelled them as 'newer untouchables' [30]. In the present study, 58.6% doctors agreed that such incidences dissuaded them from serving during the pandemic. Prime Minister Narendra Modi had implored citizens to bang pots and pans together to express gratitude to healthcare workers [31]. But doctors stated that such acts are hypocritical if they are forced out of homes by landlords due to paranoia that they might spread COVID-19 [32].

Apart from this, general public must be made more aware of the working conditions and stress that healthcare workers take to tackle the emergency situations of pandemic. They need to understand the reasons for diverting all medical workforce to deal the pandemic. Recently the most important measure taken by Indian government in this respect was issuing an ordinance that makes violence against healthcare workers a non-bailable offence, punishable by up to seven years imprisonment [26].

Majority of participants had responsibility of either child-care (59.4%) or elderly-care (58.2%) which was acting barrier to ability to serve during the pandemic. A previous study suggested that pre-planning emergency child-care or elder-care centres or facilitating the formation of emergency child-care/elder-care pools, with staff scheduled in such a way that sharing these responsibilities is possible and hence the problem can be addressed [1].

In the present study, 23.04% doctors expressed their medical illness as barrier to their ability to work might be related to the need for medication at scheduled intervals. A study indicated that this can be addressed by employers maintaining an emergency supply of medication at work along with chronic illness prescriptions, to be noted in individual employee health records so that during an event, medications can be provided [1].

A 49.2% of participants of this study brought it to light that the infrastructure at their workplace was not up to the mark to deal with COVID-19 patients. It is of utmost importance to understand that the ability of doctors to perform their jobs safely is critical to our nation's ability to combat the emergency of pandemic. It is for this reason that other countries issued the guidelines for infrastructure for COVID-19 response [33]. Similar guidelines for screening, triage, and quarantine, intensive care facility, working hours and incentives for doctors must be prepared well in advance to meet such conditions in future.

### Limitation(s)

Firstly, the response rate to the questionnaire was less possibly due to engagement of doctors in management of COVID-19. Secondly, more indicators like marital status and experience in medical field could have been added. Last but not the least the authors agree that larger population size would have given more precise results.

## CONCLUSION(S)

This study has brought into light some factors that acted as barriers to willingness and ability to work during COVID-19 for Indian doctors. Fear of contracting the disease due to lack of PPE, risking one's family for getting infected, responsibility of child-care and elderly-care along with social ostracism as 'untouchables' are the major deterrents for willingness to work. Distance from workplace, one's illness and lack of proper infrastructure at workplace are barriers to ability to work. If the doctors are forced to work unwillingly, the quality of care will be compromised. Also, it will lead to absenteeism and increased intention to leave, thus aggravating the long-standing shortage of doctors. As ours is a resource limited country, we cannot afford to stress our healthcare system by compromising their needs. Appropriate measures like providing adequate PPEs, accommodation near workplace, national guidelines for infrastructure to deal with the pandemic, facilities for child and elderly care, medication stock to meet illnesses of doctors themselves and strict laws to protect against violence from public are some of the measures suggested herewith.

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