

Original Research Article

A cross-sectional study among medical professionals regarding willingness to work amid COVID-19 outbreak

Sandhya Mishra, Ankur Shrivastava, Vijay Kumar*, Pankaj Mishra,
Anamika Chandra, Jaun Zeb Rizvi

Department of Community Medicine, Mayo Institute of Medical Sciences, Barabanki, Uttar Pradesh, India

Received: 24 November 2020

Accepted: 08 January 2020

*Correspondence:

Dr. Vijay Kumar,

E-mail: vijay.pmch@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: On January 30, 2020, the World Health Organization declared the COVID-19 outbreak a global health emergency. With nearly 25000 fresh cases registered daily, the COVID-19 tally in India rose to 13 lakh till mid of July 2020, according to the Ministry of Health and Family Welfare. Understanding the inclination of doctors to work in COVID-19 outbreak is essential for betterment of health care services. Objective were to assess the willingness of Doctors to work in COVID-19 outbreak and to determine the factors affecting willingness to work in COVID-19 outbreak.

Methods: The study was conducted among doctors working in various medical colleges, specialist hospitals and research centers across various states of India. A predesigned self-administered questionnaire in Google form was emailed to the participants. Data was collected and analysed using SPSS version 13.

Results: Out of 342 participants, 61% were willing to work in the COVID-19 pandemic. Female participants and those staying with their family were found to be significantly more afraid of COVID-19 pandemic and also willingness to work was significantly lower among them than their male counterparts living away from family.

Conclusions: The COVID-19 pandemic caused emotional distress among the doctors. However our results suggest that during an outbreak majority of doctors are willing to work and will be available in the future. Staying with family drives them away from work more due to fear of infection or death of their family members.

Keywords: COVID-19, Doctors, Fear, Pandemic, Willingness

INTRODUCTION

Corona virus disease 2019 (COVID-19) is defined as illness caused by a novel corona virus now called severe acute respiratory syndrome corona virus 2 (SARS-CoV-2; formerly called 2019-nCoV), which was first identified amid an outbreak of respiratory illness cases in Wuhan City, Hubei Province, China on 31st December 2019.¹ On January 30, 2020, the WHO declared the COVID-19 outbreak a global health emergency.² Globally, as many as 1,70,31,281 people have been infected while 6,67,060 have died till the end of July 2020. With nearly 25000 fresh cases registered daily, the COVID-19 tally in India rose to 13 lakh till mid of July 2020, according to the

Ministry of Health and Family Welfare. India continued to remain the fifth worst-affected country after the US, Brazil, Russia and the UK.³ Healthcare workers (HCWs) play a key role in any response to COVID 19 pandemic influenza, and are in the frontline of exposure to infection. Pandemics can increase morbidity and mortality, producing strain on healthcare systems and Doctors providing frontline care. Ethicists posit that frontline healthcare workers have a duty to continue working through an epidemic despite increased risk.^{4,5} Their jobs are critical or even dangerous even to their family members. Facing the scary situation, management starts to wonder: 'are the employees more or less willing to contribute? What factors affect the employees'

willingness to accept assigned jobs?’ Therefore, it is meaningful to learn from the past experiences and to find out the determinants of employees’ willingness to work during a crisis.

The purpose of this study was to assess the impact of COVID-19 pandemic on the employee’s willingness to work and the factors which influence it so that proper measures could be taken for better health care delivery.

Aims and objective

To assess the willingness of doctors to work in COVID-19 outbreak and to determine the factors affecting willingness to work in COVID-19 outbreak.

METHODS

This cross-sectional study was carried out among doctors of different streams, working in various medical colleges, hospitals and research centers, across the country during the month of June- July 2020.

A semi-structured, self-administered questionnaire was designed on the basis of a survey previously used in studies of the concerns of doctors with regard to severe acute respiratory syndrome (SARS) and avian influenza pandemics. The questionnaire was modified to assess Doctors socio-demographic and professional characteristics, attitudes and concerns regarding COVID-19. Questions on gender, age, marital status, level of education, professional role, willingness regarding working during COVID-19 pandemic were included. The anonymous four page questionnaire contained multiple choice tick-box options, four or five point Likert scale or “yes/no” responses. Both closed and open-ended questions were included. The questionnaire was sent to Doctors, in form of Google forms by e-mail and by WhatsApp. The study was undertaken during the month of June-July 2020, during the outbreak of COVID-19. A personalized explanatory letter was also sent to the Doctors with Google form. Non-responders were sent a second letter and link to Google form after 4 weeks. Data from the completed surveys were entered into Microsoft Excel and analyzed using SPSS version 13. We used Chi square test to evaluate the association of Doctors socio-demographic and professional characteristics, attitudes and concerns regarding COVID-19, and willingness to work amid COVID-19 pandemic. Of the 416 Doctors who were sent the survey form, 353 doctors participated in the survey, 11 forms were found to be incomplete so the effective sample size came out to be 342.

RESULTS

In our study the largest representation came from the Doctors aged between 31-40 years. Males had a higher response rate than the females. Out of 342 Doctors, 306 were married. Among married Doctors, 204 were having children with 137 Doctors having 2 or more children. Out

of total 342 participants 294 participants stayed with their family and 48 lived alone (Table 1).

Table 1: Demographic profile of the study population.

Age group (years)	Gender		Total
	Male	Female	
21-30	21	21	42
31-40	123	48	171
41-50	72	30	102
51-60	18	03	21
61-70	06	00	06
Total	240	102	342
Marital status	Gender		Total
	Male	Female	
Married	122	84	306
Unmarried	18	18	36
Total	240	102	342
Number of children	Gender		Total
	Male	Female	
0	66	36	102
1	70	33	103
2	89	27	116
3	15	03	18
4	00	03	03
Total	240	102	342
Whether family stays with you	Gender		Total
	Male	Female	
Yes	207	87	294
No	33	15	48
Total	240	102	342

Figure 1 depicts that, losing any of family member due to COVID-19 infection was the greatest fear (60.5%) among doctors, followed by falling themselves ill or dying of COVID-19. 28.9% of the participants had fear of personal financial losses or economic loss.

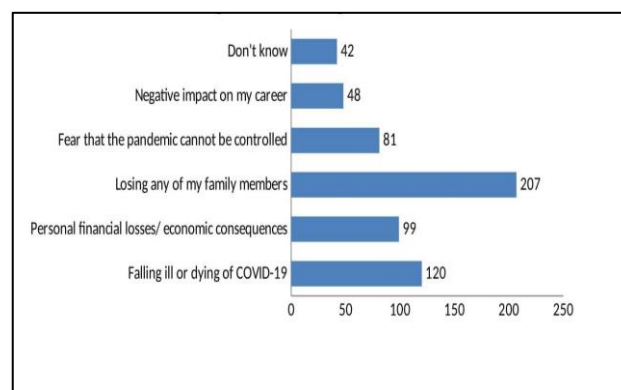


Figure 1: Fear among doctors.

When asked to the participants about their willingness to work amid COVID-19 pandemic (Table 2), males were found to be more inclined to work than female. 65% of Males were interested to work, followed by 23.8% of

males who were not sure regarding their willingness, where as 10.4% said that they did not want to work. Amongst females, 51% of the female participants were willing to work, followed by 29.4% of females who were

not sure, where as 19.6% were not willing to work. The difference of willingness to work among male and female participants was found to be statistically significant ($p=0.02$).

Table 2: Distribution of study participants according to their willingness to work.

Variable	Category	Willingness to work			Total	χ^2	P value
		Yes (%)	No (%)	Maybe (%)			
Gender	Male	158 (65.8)	25 (10.4)	57 (23.8)	240	8.069	0.02
	Female	52 (51)	20 (19.6)	30 (29.4)	102		
	Total	210	45	87	342		
Marital status	Married	186 (60.8)	39 (12.7)	81 (26.5)	306	1.775	0.41
	Unmarried	24 (66.6)	6 (16.7)	6 (16.7)	36		
	Total	210	45	87	342		
Whether have children	Yes	151 (62.9)	34 (14.1)	55 (23)	240	2.934	0.23
	No	59 (57.8)	11 (10.8)	32 (31.4)	102		
	Total	210	45	87	342		
Whether family stays with you	Yes	173(58.9)	40 (13.6)	81 (27.5)	294	6.229	0.04
	No	37 (43.8)	5 (18.7)	6 (37.5)	48		
	Total	210	45	87	342		

Table 3: Distribution of study participants regarding fear of COVID-19.

Variable	Category	Afraid of COVID-19 pandemic			Total	χ^2	P value
		Not at all afraid (%)	Moderately afraid (%)	Very much afraid (%)			
Gender	Male	57 (23.7)	156 (65)	27 (11.6)	240	11.736	0.003
	Female	9 (8.8)	84 (82.4)	9 (8.8)	102		
	Total	66	240	36	342		
Whether family stays with you	Yes	47 (15.9)	218 (74.1)	29 (10)	294	7.354	0.025
	No	19 (39.6)	22 (45.8)	7 (14.6)	48		
	Total	66	240	36	342		

Among those people who stay with their family, 58.9% of them were willing to work, followed by 27.5% who were not sure regarding their willingness, where as 13.6% did not want to work in this pandemic. Amongst those who stay away from family, 43.8% of the participants wanted to continue their work, followed by 37.5% of participants who were not sure, where as 18.7% were not having any interest to work in the current pandemic. The difference of willingness to work among those people who stay with their family and those who do not, was found to be statistically significant ($p=0.04$).

In the present study doctors were asked about their concern regarding infection by COVID-19. 80% of the survey participants were moderately afraid or very much afraid of being infected by COVID-19 due to the nature of their occupation, while 20% were not at all afraid. (Table 3). Among the study population majority of females (91.2%) were afraid, whereas among males 76.6% were afraid. The difference of fear among male and female participants was found to be statistically significant ($p=0.003$).

84.1% of the participants staying with their family were afraid of COVID-19 pandemic. The fear was found to be less (60.4%) among those who stay alone. The difference of fear among these two groups was also found to be statistically significant ($p=0.025$).

DISCUSSION

Many studies have been carried out across many countries to assess the willingness of doctors to work during public health emergency, in particular during the avian flu, SARS and MERS epidemics. In India, not even a single study has been reported, which could assess the attitudes of doctors towards their readiness to work amid COVID-19 outbreak. Our study has shown that 61.4% of the doctors are ready to work amid COVID-19 outbreak. 38.6% of them still do not want to work or not sure about their willingness. This might be due to fear of COVID-19 or the facilities they get during their work. A study conducted by Rajbhandari et al, shows that 73.9% were willing to work during the surge of COVID-19 outbreak.⁶ In a similar study conducted by Bickinson et al, among

the family physicians during the influenza pandemic showed that more than 50% physicians may be available and willing to continue to work through the pandemic.⁷ 38.6% of doctors were not willing to work in COVID-19 outbreak, a similar study done by Hsin et al during SARS outbreak found similar result.⁸

In our study we found that females are more afraid than men of working in COVID-19 outbreak. A study conducted by Perez et al reveals similar result in influenza pandemic.⁹ Female physicians especially need to be provided with support in such aspects as childcare and protective measures to encourage them to maintain frontline care. This will become more important as women become the majority of doctors.

The present study reveals that majority of doctors (84.1%) were afraid of COVID-19 outbreak who stay with their family. This could be due to imposed risk of their family members to get infected.

CONCLUSION

The COVID-19 pandemic caused emotional distress among the doctors. Our results suggest that during an outbreak majority of doctors will be available and willing to work. Men appear to be more willing to continue working than women. However many of them are afraid and not willing to work. The main sentiments centered upon personal safety and safety of family members. So measures must be taken to focus more on personal care as well as care of their family members.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. CDC. 2019 Novel corona virus, Wuhan, China. CDC. Available at: <https://www.cdc.gov/>

2. coronavirus/2019-cov/about/index.html. Accessed on 11 October 2020.
2. Gallegos A. WHO declares public health emergency for novel corona virus. Medscape Medical News. Available at: <https://www.medscape.com/viewarticle/924596>. Accessed on 10 October 2020.
3. <https://indianexpress.com/article/india/coronavirus-india-news-live-updates-india-covid-19-cases-tracker-corona-virus-cases-in-india-state-wise-lockdown-today-latest-news-update-6451101/>
4. The Canadian pandemic influenza plan for the health sector: resource guidelines for health care facilities during an influenza pandemic. Public health agency of Canada. <http://www.phac-aspc.gc.ca/cpipplcpi/ann-h-eng.php#321>. Accessed on 10 October 2020.
5. Davies CE, Shaul RZ. Physicians' legal duty of care and legal right to refuse to work during a pandemic. CMAJ. 2010 Feb 9;182(2):167-70.
6. Rajbhandari P, Maharjan K. Willingness of emergency and medicine department doctors to work during surge of COVID-19 patients, Patan Hospital, Nepal. J Patan Acad Health Sci. 2020;7(1):25-30.
7. Dickinson JA, Bani-Adam G, Williamson T, Berzins S, Pearce C, Ricketson L, et al. Alberta family physicians' willingness to work during an influenza pandemic: a cross-sectional study. Asia Pac Fam Med. 2013;12(1):3.
8. Hsin DH, Macer DR: Heroes of SARS: professional roles and ethics of health care workers. J Infect. 2004, 49(3):210-5.
9. Perez V, Aiello AE, Murray GF, Coulborn R, Monto AS. Fear, stress, and reported pandemic influenza response among university students in the US. Int J Infect Dis. 2008;12:e444.

Cite this article as: Mishra S, Shrivastava A, Kumar V, Mishra P, Chandra A, Rizvi JZ. A cross-sectional study among medical professionals regarding willingness to work amid COVID-19 outbreak. Int J Community Med Public Health 2021;8:755-8.