

COVID-19 Fear Among Health Care Workers (HCW) and Non-HCW in IGMC, Shimla: An Online Questionnaire-Based Prospective Study

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ABSTRACT

The unremitting COVID-19 pandemic is evoking anxiety, fear, panic, and socio-occupational stress among human population all around the globe. This cross-sectional study was planned to assess the fear and anxiety because of COVID-19 pandemic among health care professionals, patients, and general public in IGMC, Shimla. A cross-sectional, web-based survey was conducted in month of December 2020. COVID-19 fear questionnaire was used to assess fear among participants. A total of 162 responses were received. Ninety-five (41.35%) respondents were males and 67(58.64%) were females. Average total score of COVID-19 fear based on questionnaire was 17.71 among the participants. The majority of respondents 67(41.4%) were afraid of COVID-19, 53(32.7%) were neutral, whereas 42 (25.9%) were not afraid of COVID-19. Sixty-two (38.3%) responders were uncomfortable thinking about COVID-19, whereas, 67(41.4%) were not uncomfortable. Only 22 (13.6%) participants felt their hands clammy when they thought of COVID-19, 78 (48.15%) respondents were afraid of losing their life, 78 (48.15%) respondents disagreed with the question of being nervous or anxious to hear news and stories of COVID-19. Thirteen (8%) participants were informed of sleeplessness, and 22 (13.5%) reported palpitations due to COVID-19 fear. COVID-19 fear was evident in 65.15% of all males and 55.8% of all females' respondents, respectively. Seventy percent of participants of age more than 40 years were afraid of COVID-19, whereas only 54.83% participants of less than 40 years had COVID-19 fear. COVID-19 fear was more evident among non-HCW (74.42%) as compared to HCW in whom it was seen in 53.03% participants. Rampaging Pandemic has ingrained fear and anxiety among non-HCW as well as health care workers. But undeterred by COVID-19 fear, majority of participants didn't fear death and didn't have other effects of fear. Despite (can be used) surging pandemic when fear of COVID-19 is soaring, HCW and non-HCW could work, think, and live.

KEYWORDS: COVID-19, Fear, Pandemic, Survey.

1. INTRODUCTION

The COVID-19 pandemic is a result of high transmission of severe acute respiratory syndrome COVID-19 virus 2 (SARS-CoV2). The first case of COVID-19 was identified in Wuhan, China in December 2019. Widespread restrictions were imposed after the unfurling of COVID-19 in China. India reported its first case of COVID-19 on January 30, 2020 [1].

The World Health Organization declared the outbreak a Public Health Emergency of International Concern in January 2020 and a pandemic in March 2020. As of February 25, more than 113.6 million cases have been confirmed, with more than 2.53 million deaths attributed to COVID-19.

Since then, India had the largest number of confirmed cases in Asia, and has the second-highest number of confirmed cases in the world after the United States with more than 11.3 million reported cases of COVID-19 infection and more than 156,560 deaths as of February 25, 2021. Extremely high transmission rate, infectivity of COVID-19, and mortality of patients lead to fear and panic among general populations across the globe. Fear and anxiety of getting infected by COVID-19 has been reported by Lin *et al.* Haplessly, fear and anxiety has amplified the damages of COVID-19 [2].

Fear is an adaptive response in the presence of danger. However, when the threat is uncertain and continuous, as in ongoing COVID-19 pandemic, fear can become chronic and bothersome. On the other hand, when there is insufficient fear, this may also result in harm for individuals and society (e.g., due to people ignoring government measures to slow the spread of COVID-19 virus or due to reckless policies that ignore the risks). Furthermore, fear triggers safety behaviors (e.g., hand washing) that can mitigate certain threats (e.g., contamination), but they may paradoxically also enhance fear (e.g., contamination concerns and health anxiety) [3]. Fear leads to other psychosocial challenges including stigmatization, discrimination (Pappas *et al.* 2009). People cannot think rationally and distinctly with COVID-19 fear in mind [4].

The fear of COVID-19 scale, a 7-item scale, was developed by Ahorsu *et al.* and has psychometric properties. It is reliable and valid in assessing the fear of COVID-19 among the general population. It can be of use in allaying COVID-19 fears among individuals as well as in educating the populations [5].

This cross-sectional study was planned to assess the fear and anxiety among health care professionals, patients, and general public in IGMC, Shimla because of COVID-19 pandemic.

2. METHOD(S)

We conducted this cross-sectional questionnaire-based study conducted in month of December 2020. The fear of COVID-19 scale based on questionnaire was used to assess the extent of fear among health personals, non-health personals, and patients. The questionnaire has set of 7 questions with 5 responses for each question. The questions are:

1. *I am most afraid of COVID-19.*
2. *It makes me uncomfortable to think about COVID-19.*
3. *My hands become clammy when I think about COVID-19.*
4. *I am afraid of losing my life because of COVID-19.*
5. *When I watch news and stories about COVID-19 on social media, I become nervous or anxious.*
6. *I cannot sleep because I'm worried about getting COVID-19.*
7. *My heart races or palpitates when I think about getting COVID-19.*

The participants indicate their level of agreement with the statements using a 5-item Likert-type scale. Answers included “strongly disagree,” “disagree,” “neutral,” “agree,” and “strongly agree.” The minimum score possible for each question is 1, and the maximum is 5. A total score could be calculated by adding up each item score (ranging from 7 to 35).

We conducted this study by sending an online questionnaire by WhatsApp or e-mail to health care workers, patients, and general population in IGMC, Shimla. Questionnaires were sent to 210 persons out of whom 162 responded.

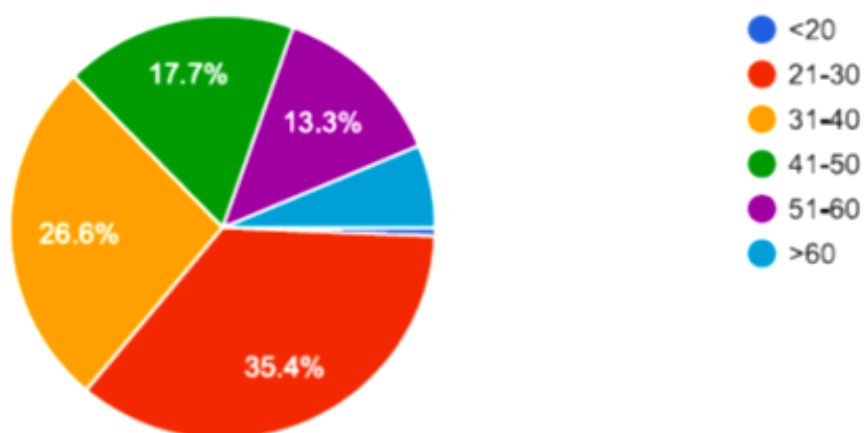
2.1. STATISTICAL ANALYSIS

Data were collected and entered in Microsoft excel spreadsheet cleaned for errors, and analyzed using Epi Info software version 7.2.2. Descriptive statistics were used to summarize the demographic data. Frequencies and their percentages were used to describe categorical variables. Pearson chi-square and Fisher exact tests were used for comparison of qualitative variables. A 2-sided p-value of < 0.05 was considered statistically significant.

3. RESULTS

A total of 162 participants have responded to the questionnaire. Maximum respondents, i.e., 56 (35.6%) were from age group of 21–30 years followed by 42 (25.93%) respondents from age group 31–40 years (Figure 1).

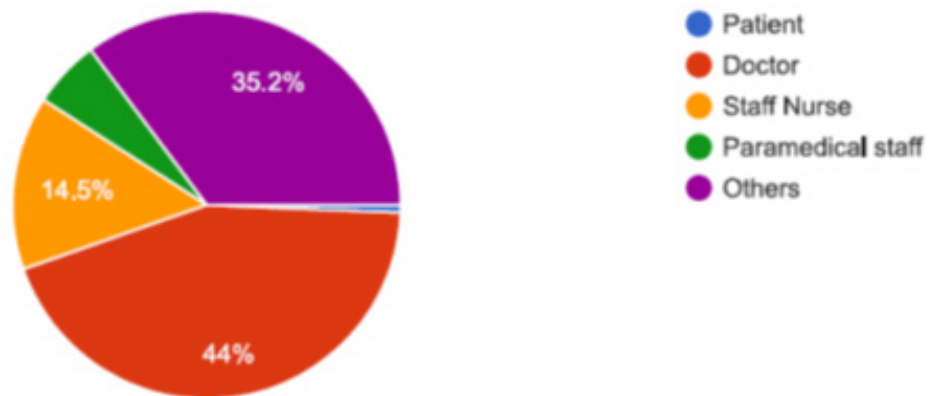
Figure 1: Pie chart showing age group-based (in years) distribution of respondents (%).



Male respondents surpassed females in our study. Most respondents were male 95 (58.6%), whereas 67 (41.35%) were females. Average total score of COVID-19 fear based on questionnaire was 17.71 among the participants.

Health care workers as respondents outnumbered non-HCW, i.e., 102 and 60, respectively. On further stratification of HCW group, 44% were doctors, 14.55% were staff nurses (Figure 2).

Figure 2: Pie chart showing occupation distribution among respondents in our study.



Most respondents were without any illness, i.e., 74.1%, whereas 12% had hypertension and 11.1% were diabetic (Figure 3).

Figure 3: Pie chart showing morbidities among respondents.

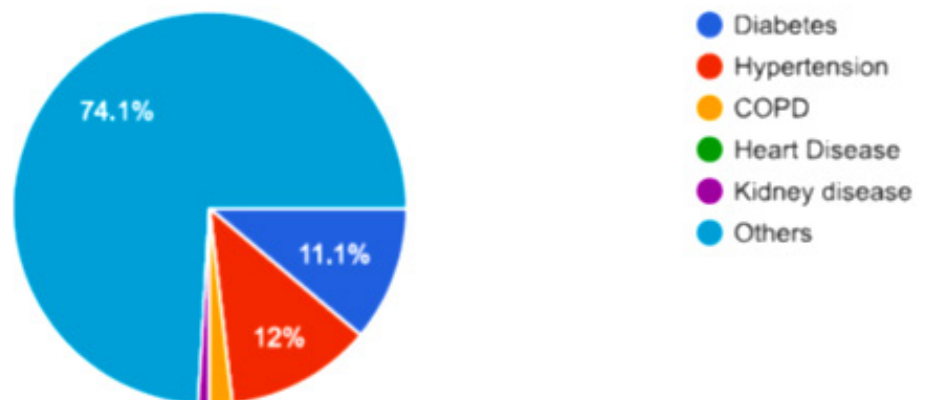


Table 1 describes COVID-19 fear questionnaire and responses. Details of individual responses are discussed as follows.

Table 1: COVID-19 fear questionnaire.

Questions	Responses					Responses
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
1. I am afraid of COVID-19	22 (13.6%)	20 (12.355)	53 (32.7%)	49 (30.25%)	18 (11%)	162
2. It makes me uncomfortable to think about COVID-19	24 (14.81%)	43 (26.54%)	33 (20.33%)	51 (31.48%)	11 (6.79)	162
3. My hands became clammy when I think about COVID-19	44 (27.2%)	67 (41.4%)	29 (17.9%)	18 (11.1%)	4 (2.5%)	162

Questions	Responses					Responses
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
4. When I watch news and stories about COVID-19 on social media, I become nervous or anxious	25 (15.4%)	53 (32.7%)	36 (22%)	39 (24%)	9 (5.6%)	162
5. I cannot sleep because I am worrying about getting COVID-19	58 (35.60%)	66 (40.7%)	25 (15.4%)	9 (5.6%)	4 (2.5%)	162
6. I am afraid of losing my life because of COVID-19	25 (15%)	57 (35.2%)	39 (24%)	29 (17.9%)	12 (7.4%)	162
7. My heart races and palpitate when I think about getting COVID-19	51 (31.5%)	65 (40%)	24 (14.8%)	18 (11%)	4 (2.47%)	162

3.1. DETAILS OF RESPONSES TO COVID-19 FEAR QUESTIONNAIRE AS FOLLOWS

- I am most afraid of COVID-19.
Majority of respondents, i.e., 67 (41.4%) were afraid of COVID-19, whereas 42 (25.9%) were not afraid of COVID-19 and 53 (32.7%) participants were neutral to question 1.
- It makes me uncomfortable to think about COVID-19.
Sixty-two (38.3%) were uncomfortable to think about COVID-19, whereas 67 (41.4%) were not uncomfortable. Twenty percent were neutral to this question.
- My hands become clammy when I think about COVID-19.
Only 22 (13.6%) felt their hands clammy when they thought of COVID-19. Eleven hundred eleven (68.5%) did not feel their hands clammy when they think about COVID-19.
- I am afraid of losing my life because of COVID-19.
Seventy-eight respondents were afraid of losing their life, whereas 41 respondents were not afraid of losing their life due to COVID-19.
- When I watch news and stories about COVID-19 on social media, I become nervous or anxious.
Seventy-eight respondents disagreed with question of being nervous or anxious on hearing news and stories of COVID-19. Forty-eight felt anxious to hear news and stories about COVID-19, whereas 36 respondents were neutral.
- I cannot sleep because I'm worried about getting COVID-19.
Thirteen respondents reported that their sleep was disturbed due to COVID-19 fear, whereas most 124 (76.5%) can sleep with no fear of COVID-19.
- My heart races or palpitates when I think about getting COVID-19.
One hundred sixteen respondents didn't had palpitations on thinking of COVID-19, whereas 22 (13.5%) had palpitations while thinking of COVID-19.

Below is given the stratification of responses according to gender, age, and occupation.

3.1.1. GENDER

On stratifying responses to COVID-19 fear questionnaire as yes or no, there was no significant difference observed among male and female respondents (Table 2).

Table 2: Response distribution according to gender.

COVID-19 fear questionnaire	Gender		P-value
	Female	Male	
I am most afraid of COVID-19			
Agree	24 (35.82)	43 (64.18)	0.328
Disagree	19 (45.24)	23 (54.76)	
It makes me uncomfortable to think about COVID-19			
Agree	23 (37.10)	39 (62.90)	0.164
Disagree	33 (49.25)	34 (50.75)	

My hands become clammy when I think about COVID-19 Agree Disagree	11 (50.00) 44 (39.64)	11 (50.00) 67 (60.36)	0.367
I am afraid of losing my life because of COVID-19 Agree Disagree	20 (48.78) 32 (39.02)	21 (51.22) 50 (60.98)	0.302
When I watch news and stories about COVID-19 on social media, I become nervous or anxious Agree Disagree	18 (37.50) 34 (43.59)	30 (62.50) 44 (56.41)	0.500
I cannot sleep because I'm worried about getting COVID-19 Agree Disagree	4 (30.77) 51 (41.13)	9 (69.23) 73 (58.87)	0.468
My heart races or palpitates when I think about getting COVID-19 Agree Disagree	8 (36.36) 49 (42.24)	14 (63.64) 67 (57.76)	0.608

Most respondents, males (65.15%) and females (55.8%), agree to question "I am most afraid of COVID-19." More males (53.42%) were uncomfortable thinking about COVID-19 than females (41%). In all others questions, most males and females disagreed regarding COVID-19 fear.

3.1.2. AGE

All respondents were divided into 2 groups according to age of fewer than 40 years and those of more than 40. Almost 70.21% participants of age more than 40 years were afraid of COVID-19, whereas only 54.83% of participants of less than 40 years had COVID-19 fear. Participants of more than 40 years of age, who were uncomfortable to think about COVID-19, were 62.5% as compared to 39.51% age group less than 40 years. In other questions of COVID-19 fear scale, respondents disagreed in both groups (Table 3).

Table 3: Response distribution according to age.

COVID-19 fear questionnaire	Age		P-value
	>40 yrs. (%)	<40 yrs. (%)	
I am most afraid of COVID-19 Agree Disagree	33 (49.25) 14 (33.33)	34 (50.75) 28 (66.67)	0.102
It makes me uncomfortable to think about COVID-19 Agree Disagree	30 (48.39) 18 (26.87)	32 (51.61) 49 (73.13)	0.012
My hands become clammy when I think about COVID-19 Agree Disagree	12 (54.55) 37 (33.33)	10 (45.45) 74 (66.67)	0.060
I am afraid of losing my life because of COVID-19 Agree Disagree	18 (43.90) 30 (36.59)	23 (56.10) 52 (63.41)	0.433
When I watch news and stories about COVID-19 on social media, I become nervous or anxious Agree Disagree	19 (39.58) 28 (35.90)	29 (60.42) 50 (64.10)	0.678
I cannot sleep because I'm worried about getting COVID-19 Agree Disagree	8 (61.54) 45 (36.29)	5 (38.46) 79 (63.71)	0.075

COVID-19 fear questionnaire	Age		P-value
	>40 yrs. (%)	<40 yrs. (%)	
My heart races or palpitates when I think about getting COVID-19			
Agree	11 (50.00)	11 (50.00)	0.289
Disagree	44 (37.93)	72 (62.07)	

3.1.3. OCCUPATION

All respondents were divided into health care workers and non-HCW groups. COVID-19 fear was more evident among non-HCW (74.42%) as compared to HCW in whom it was seen in 53.03% participants. Thirty-five percent of HCW were uncomfortable thinking about COVID-19 compared to 69.39% in non-HCW group. In all other questions, more respondents disagreed in both groups (Table 4).

Table 4: Response distribution according to occupation.

COVID-19 fear questionnaire	Occupation		P-value
	Non HCW (%)	HCW (%)	
I am most afraid of COVID-19			
Agree	32 (47.76)	35 (52.24)	0.025
Disagree	11 (26.19)	31 (73.81)	
It makes me uncomfortable to think about COVID-19			
Agree	34 (54.84)	28 (45.16)	<0.000
Disagree	15 (22.39)	52 (77.61)	
My hands become clammy when I think about COVID-19			
Agree	11 (50.0)	11 (50.0)	0.052
Disagree	32 (28.83)	79 (71.17)	
I am afraid of losing my life because of COVID-19			
Agree	21 (51.22)	20 (48.78)	0.036
Disagree	26 (31.71)	56 (68.29)	
When I watch news and stories about COVID-19 on social media, I become nervous or anxious			
Agree	20 (41.67)	28 (58.33)	0.213
Disagree	24 (30.77)	54 (69.23)	
I cannot sleep because I'm worried about getting COVID-19			
Agree	5 (38.46)	8 (61.54)	1.000
Disagree	45 (36.29)	79 (63.71)	
My heart races or palpitates when I think about getting COVID-19			
Agree	9 (40.91)	13 (59.09)	0.675
Disagree	42 (36.21)	74 (63.79)	

4. DISCUSSION

With the upsurge of COVID-19 in China (December 2019) and in Europe (February 2020), surveys indicate sharp increases in fear and worries relating to the COVID-19 pandemic [6].

COVID-19 stress scales (CSS) developed by Taylor *et al.* pointed out 5 factors of stress and anxiety symptoms relating to the COVID-19 virus: (1) danger and contamination, (2) fears about economic consequences, (3) COVID-19 virus-related xenophobia, (4) compulsive checking and reassurance-seeking, and (5) traumatic stress symptoms [7].

Schimmenti *et al.* (2020) reported 4 domains of fear: (1) fear for the body, (2) fear for significant others, (3) fear of not knowing, and (4) fear of inaction [8]. Sanafelt *et al.* conducted listening sessions with different health care professionals and reported the sources of anxiety during COVID-19 as follows:

(1) having appropriate PPE, (2) exposing family members to the infection, (3) access to testing and fear of propagating the infection at work, (4) uncertainty that their organization would take care of their needs if they become infected, (5) access to

childcare during work hours, (6) support for other personal and family needs, (7) providing competent medical care if deployed to a new area, and (8) up-to-date information and communications [9].

Current treatment modalities of COVID-19 are focused on infection transmission control, antiviral, and supportive treatment, and development of effective vaccine whereas psychosocial aspect has been neglected. So much work has to be done on psychosocial aspect of COVID-19 to achieve the holistic goal of having a society free of COVID-19 fear [10].

Our study showed that male participants, older participants (more than 40 years of age), non-HCW feared more of COVID-19. Fewer participants had their hands clammy, were anxious, had palpitations, couldn't sleep, and fear of losing life due to COVID-19. Our study has highlighted inflated fear among participants, although was not grave enough to disrupt their socio-occupational activities. This study will be useful in providing valuable information on the fear of COVID-19 to facilitate public health initiatives on alleviating fear among general populations. Health care professionals of our institution, despite having COVID-19 fear can work rationally to bring down this menacing COVID-19 pandemic.

5. CONCLUSION

Rampaging pandemic has ingrained fear and anxiety among health care workers and non-HCW. In spite of surging pandemic when fear of COVID-19 is soaring, HCW and non-HCW could work, think, and live. But undeterred by COVID-19 fear, majority of participants didn't fear death and didn't have other effects of fear. They were aware of the threat posed; however, their fear hasn't caused panic. This suggests positivity among health workers and their awareness will help us to counter COVID-19 pandemic. On the other hand, non-HCW need to be counseled not to panic and take precautionary measures as advised by experts.

CONFLICT OF INTEREST

None.

AUTHOR CONTRIBUTIONS

All authors contributed equally to this study.

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