Fear of COVID-19 among Health Workers during the Early Stage of Pandemic in Nepal

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ABSTRACT

Introduction: Fear is an emotion that has effects on behavior of people and fear of COVID-19 has significantly impacted the psychological and mental well-being of health workers. The study aimed to assess the fear of COVID-19 among health workers of different cadre during COVID-19 pandemic in Nepal.

Methods: This was cross-sectional online survey involving 427 health workers currently working in Nepal from April 25 to June 10, 2020. COVID-19 fear was measured using a standard scale of seven items. Questionnaire was prepared in Google form and was sent to study population through social medias and emails. Descriptive and inferential statistics were computed at 5% level of significance. Ethical approval was taken from Nepal Health Research Council, Kathmandu.

Results: Of the total, 49.6% respondents were male and 50.4% were female. Among total, 58.8 % respondents were in the age group of 19 to 29 years, and 38.4% respondents were from government organizations. Nearly half of the respondents were doctors. Out of maximum 35 COVID-19 fear score, mean COVID-19 fear was16.38 among males and 19.00 among females, 19.48 among nursing professional and 16.80 among doctors. Mean COVID-19 fear was significantly different across sex and type of health workers. Type of the organization did not have any significant relation with mean fear of COVID-19. Most of the items of COVID-19 fear were significantly associated with sex and type of health workers.

Conclusion: A high level of COVID-19 fear among health workers was found in Nepal during the early stage of COVID-19 pandemic. Mean COVID-19 fear was significantly different across sex and type of health workers. Sex of the health workers and type of profession should be considered while planning psychological intervention among health workers to address the impact of COVID-19 fear.

Keywords: *Health workers, COVID-19, Coronavirus, Fear, Nepal*

INTRODUCTION

As early as November 2019, a pneumonia-like disease emerged in Wuhan, China, which the World Health Organization later called Coronavirus Disease 2019 or COVID-19. Within a few months, COVID–19 has caused significant damage to public health, with severe financial and economic loss throughout the world.[1,2] It is highly transmissible and infection caused by severe acute respiratory syndrome coronavirus 2 (SARS- CoV-2)[3] The pandemic has cause a fear, panic, and mental health problems in the public and healthcare workers.[4,5] Public health measures such as quarantine, physical distancing, hand washing and use of mask are implemented in all countries to control the spread of COVID-19.[6–8] Uneventful circumstances such as disease outbreaks and pandemics induce fear among many individuals. People fear getting infected and then transmitting to their loved ones and other people around them. Fear of COVID-19 causes healthcare access delays, or even suicide.[9,10] Healthcare professionals in the meantime still have to work and continue providing care. They are more likely to have psychological health problems.[11,12] Health care professionals interacting with infected and non-infected patients are of no exception. They are on duty of care to the patients, interaction with the patient's relatives, and occasionally, facing the public inquiry. A study reports that excessive workload, isolation, and discrimination among frontline health professionals, thus, contributing to physical exhaustion, insomnia, emotional disturbance, and fear.[13] Frontline health workers (HWs) were saving lives while encountering an increasing workload and risk of infection.[14] The mental health problems of health workers would impair their attention, cognitive functioning, and clinical decision-making, consequently increase the occurrence of medical errors and incidents, and ultimately put patients at risk.[15,16] There are key challenges which require urgent attention to ensure the mental health wellbeing for all patients, healthcare professionals, first responders, people with psychiatric

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disorders, and the general population. Mental healthcare should be an integral component of healthcare policy and practice toward COVID-19.[17] The fear of COVID-19 Scale, a seven-item scale, has been recently developed and proved to be reliable and valid in assessing fear of COVID-19 among the general population.[18] To mitigate and contain COVID-19 spread and its unfavorable mental health consequences, it is essential to detect adverse psychological problems and implement appropriate interventions at an early stage of their occurrence.[19,20] Health care workers are at frontline during any outbreak; there should be well planned workplace protocol, guidelines for caring such patient, safety practices when handling patients, relevant training, response plan and coordination with other agencies would help to reduce the psychological stress and fear of situation to the health workers.[21] Little information is known about the level of fear of COVID-19 among the health workers during the emergency of the COVID-19 pandemic. Measuring and understanding mental health aspect of health workers is essential to fight COVID-19 in long turn. Therefore, we aimed to assess the fear of COVID-19 among health worker of different cadre during early stage of COVID-19 pandemic in Nepal.

METHODS

A cross sectional online survey was conducted among the health workers currently working in Nepal. The study is a part of a study entitled "Perceived risk, fear of Covid-19 and psychological distress among health workers during covid-19 pandemic in Nepal: an online survey". The information was collected from 25th April to 10thJune, 2020. A convenient sampling method was applied to select the respondents. For the study, medical doctors, nurses, pharmacists, laboratory workers, ANM, AHW, and CMA working in different health care setup were the participants. Online survey questionnaire was sent to the respondents who were in contact of researcher through email and social media (messenger, viber, whatsapp). Four hundred thirty-two responses were collected; 5 samples were excluded from analysis because they were not health workers or were not paid workers.

Socio-demographic information like age, sex, marital status, ethnicity, religion, educational level, number of family member, type of organizations involved, job cadre, department, years of work experience, current working province were assessed through structured questionnaire. We measured fear with the Covid-19 Fear scale (FCV-19S) presented in a Likert format in five categories of responses

(strongly disagree, disagree, neither agree nor disagree, agree, strongly agree).[22] It consists of a seven-item uni-dimensional scale with robust psychometric properties (Cronbach's alpha internal consistency 0.82) reliable and valid in assessing and relieving fears of Covid-19 among individuals. Scores range from 7 to 35 indicating levels of fear: normal (7 – 16); mild/moderate (17 – 26); and severe (27 – 35).[22] Data were collected through Google forms using online survey questionnaire. Link was sent to study population using email and social media. Google forms provide security and anonymity to respondents. Before answering the questionnaire, respondents read and accepted the informed consent form that explained the objective and nature of the study. Respondents were informed that they could refuse to answer any question and withdraw at any time from the research.

Statistical analysis used

Statistical Package for Social Science (SPSS) version 22.0 was used for data entry, data editing and data analysis. Descriptive and inferential statistics were computed. Chi-square and t-test were applied. The significance level was set at 5% for all analysis.

Ethical consideration

Ethical approval was taken from ethical review board of Nepal Health Research Council (Referenced number 2191; ERB number 310/2020). Informed consent form was placed at the first page of the online questionnaire form. The objective of the study, statement of confidentiality and autonomy were declared before starting the survey. Written digital consent was taken from participants prior to starting the survey. Health workers agreed to participate by ticking the agreed option and could proceed to reply the questions included in the survey.

RESULTS

Among the respondents, 49.6% respondents were male and 50.4% were female. Among them, 58.8% were in the age group of 19 to 29 years; and 63.5% were from nuclear family; majorities (92.0%) were Hindu. Of the total respondents, 38.4% participants were from government organization and 29.7% were from medical colleges. Nearly half of the respondents (48.0%) were doctors and about one fourth (24.8%) were nursing professionals. About one third (31.6%) had completed bachelor or higher level of education. Among the respondents, more than half (53.2%) had mild, moderate and severe level of fear of COVID-19.

Table 1: Characteristics of the study population (n=427)

	Characteristics	Numbers (n=427)	Percentage (%)
Sex	Male	212	49.6
	Female	215	50.4
Age-group(in years)			
	19-29	248	58.1
	30-39	143	33.5
	>40	31	7.2
	Missing	5	1.2
Types of family	Nuclear	271	63.5
	Joint/extended	156	36.5
Religion	Hindu	393	92.0
	Buddhist and others	34	8.0
Ethnicity	Brahmin/Chhetri	300	70.3
	Newar/Gurung/Magar	93	21.7
	Others	34	8.0

Education Level	Bachelor and below	292	68.4
	Masters and above	135	31.6
Job cadre	Doctors	205	48.0
	Nurse	106	24.8
	Other health workers*	116	27.2
Types of organization			
	Government	164	38.4
	Non-Government/ Private/ Medical college	263	61.6
Fear of COVID-19	Normal	200	46.8
	Mild to Moderate	198	46.4
	Severe	29	6.8

*Pharmacists/laboratory workers/ANM/ AHW/ CMA

Table 2 displays mean fear among health workers which was 17.70 (± 5.94); and it was 16.38 among males and 19.00 among female. Mean fear of government health worker was 17.49 and other non government/private organization was 17.82. This difference was significant across sex and job cadre. Type of organization was not found statistically significant.

Table 2: Mean COVID-19 fear level among health workers

	Characteristics	Mean (±SD)	Test value	P value
Mean fear		17.70 ± 5.94	_	_
Sex				
	Male	16.38 (±5.92)	-4.66	<0.001
	Female	19.00 (±5.67)		
Organization				
	Government	17.49 (±6.24)	-0.566	0.571
	Non-Government/Private/ Medical College	17.82 (±5.751)		
Job Cadre				
	Doctor	16.80 (±5.34)	7.332	0.001
	Nurse	19.48 (±6.04)		
	Other health worker	17.70 (±6.51)		

Table 3: Responses on items of COVID-19 fear among health workers by sex

S.N.	Items of COVID-19 Fear scale	Male	Female	Chi-square value	P value
1.	Afraid of coronavirus-19				
	Strongly disagree/Disagree/Neutral	143 (67.5)	92 (42.8)	26.236	<0.001
	Agree/Strongly Agree	69 (32.5)	123 (57.2)		
2.	It makes me uncomfortable to think about coronavirus-19				
	Strongly disagree/Disagree/Neutral	149 (70.3)	114 (53.0)	13.442	<0.001
	Agree/Strongly Agree	63 (29.7)	101 (47.0)		
3.	My hands become clammy when I think about coronavirus-19				
	Strongly disagree/Disagree/Neutral	181 (85.4)	176 (81.9)	0.963	0.326
	Agree/Strongly Agree	31 (14.6)	39 (18.1)		
4.	I am afraid of losing my life because of coronavirus-19				
	Strongly disagree/Disagree/Neutral	174 (82.1)	161 (74.9)	3.266	0.071
	Agree/Strongly Agree	38 (17.9)	54 (25.1)		
5.	When watching news and stories about coronavirus-19 on social media, I become nervous or anxious				
	Strongly disagree/Disagree/Neutral	144 (67.9)	96 (44.7)	23.489	<0.001
	Agree/Strongly Agree	68 (32.1)	119 (55.3)		
6.	I cannot sleep because I'm worrying about getting coronavirus-19				
	Strongly disagree/Disagree/Neutral	199 (93.9)	195 (90.7)	1.504	0.220
	Agree/Strongly Agree	13 (6.1)	20 (9.3)		
7.	My heart races or palpitates when I think about getting coronavirus-19				
	Strongly disagree/Disagree/Neutral	189 (89.2)	168 (78.1)	9.443	0.002
	Agree/Strongly Agree	23 (10.8)	47 (21.9)		

Table 3 shows the sex wise response of fear of COVID-19 among different health workers. More than half (57.2%) of the females agreed that they were afraid of coronavirus. Almost half of the female respondents agreed that they felt uncomfortable to think about coronavirus; this proportion was higher as compared to males. Being afraid, feeling uncomfortable thinking about COVID-19, being nervous and anxious when watching news and stories of coronavirus and the thoughts of getting coronavirus were found to be significantly associated with sex of the respondents.

Table 4: Responses on items of COVID-19 fear among health workers by their working organizations

S.N.	Items of COVID-19 Fear scale	Government	NGO/ Private	Chi-square value	P value
1.	Afraid of coronavirus-19				
	Strongly disagree/Disagree/Neutral	88 (53.7)	147 (55.9)	0.204	0.652
	Agree/Strongly Agree	76 (46.3)	116 (44.1)		
2.	It makes me uncomfortable to think about coronavirus-19				
	Strongly disagree/Disagree/Neutral	96 (58.5)	167 (63.5)	1.051	0.305
	Agree/Strongly Agree	68 (41.5)	96 (36.5)		
3.	My hands become clammy when I think about coronavirus-19				
	Strongly disagree/Disagree/Neutral	135 (82.3)	222 (84.4)	0.323	0.57
	Agree/Strongly Agree	29 (17.7)	41 (15.6)		
4.	I am afraid of losing my life because of coronavirus-19				
	Strongly disagree/Disagree/Neutral	133 (81.1)	202 (76.8)	1.101	0.294
	Agree/Strongly Agree	31 (18.9)	61 (23.2)		
5.	When watching news and stories about coronavirus-19 on social media, I become nervous or anxious				
	Strongly disagree/Disagree/Neutral	102 (62.2)	138 (52.5)	3.880	0.049
	Agree/Strongly Agree	62 (37.8)	125 (47.5)		
6.	I cannot sleep because I'm worrying about getting coronavirus-19				
	Strongly disagree/Disagree/Neutral	152 (92.7)	242 (92.0)	0.063	0.802
	Agree/Strongly Agree	12 (7.3)	21 (8.0)		
7.	My heart races or palpitates when I think about getting coronavirus-19				
	Strongly disagree/Disagree/Neutral	136 (82.9)	221(84.0)	0.09	0.764
	Agree/Strongly Agree	28 (17.1)	42 (16.0)		

Table 4 displays the association between items of fear of COVID-19 and type of organization. Being anxious and nervous while watching about corona virus on social media was significantly associated with types of organization. (p<0.001)

Table 5: Responses on items of COVID-19 fear among health workers of different cadre

S.N.	Items of COVID-19 Fear scale	Doctor	Nursing	Other	Chi-square value	P value
1.	Afraid of coronavirus-19					
	Strongly disagree/Disagree/Neutral	122 (59.5)	41 (38.7)	72 (62.1)	15.438	<0.001
	Agree/Strongly Agree	83 (40.5)	65 (61.3)	44 (37.9)		
2.	It makes me uncomfortable to think about coronavirus-19					
	Strongly disagree/Disagree/Neutral	138 (67.3)	55 (51.9)	70 (60.3)	7.137	0.028
	Agree/Strongly Agree	67 (32.7)	51 (48.1)	46 (39.7)		
3.	My hands become clammy when I think about coronavirus-19					
	Strongly disagree/Disagree/Neutral	186 (90.7))	77 (72.6)	94 (81.0)	17.452	<0.001
	Agree/Strongly Agree	19 (9.3)	29 (27.4)	22 (19.0)		
4.	I am afraid of losing my life because of coronavirus-19					
	Strongly disagree/Disagree/Neutral	164 (80)	78 (73.6)	93 (80.2)	1.979	0.372
	Agree/Strongly Agree	41 (20.0)	28 (26.4)	23 (19.8)		
5.	When watching news and stories about coronavirus-19 on social media, I become nervous or anxious					
	Strongly disagree/Disagree/Neutral	125 (61.0)	46 (43.4)	69 (59.5)	9.467	0.009
	Agree/Strongly Agree	80 (39.0)	60 (56.6)	47 (40.5)		
6.	I cannot sleep because I'm worrying about getting coronavirus-19					
	Strongly disagree/Disagree/Neutral	198 (96.6)	94 (88.7)	102 (87.9)	10.333	0.006
	Agree/Strongly Agree	7 (3.4)	12 (11.3)	14 (12.1)		
7.	My heart races or palpitates when I think about getting coronavirus-19					
	Strongly disagree/Disagree/Neutral	183 (89.3)	78 (73.6)	96 (82.8)	12.623	0.002
	Agree/Strongly Agree	22 (10.7)	28 (26.4)	20 (17.2)		

Table 5 reveals the fear of COVID-19 among different health workers of different cadres. Among those who agreed on being afraid of coronavirus more than 40% were doctors (83/192, 43.22%) followed by nurses (65/192, 33.85%). It was found that being afraid, feeling uncomfortable and clammy hands whenever they thought about coronavirus were significantly associated with different job cadre of health workers. Similarly, feeling of anxiousness or nervous while watching about coronavirus on social media and having disturbed sleep or palpitation when have thought about COVID-19 had significantly associated with different job. (p<0.001)

DISCUSSION

The study revealed the level of COVID-19 fear among health workers of all cadres. Among total population of Nepal, number of cases ranged from 49 in April 25 to 4085 in June 10 including 15 deaths during the data collection period.[23] We analyzed that more than half of the health workers were under the category of moderate, mild and severe level of fear. The mean COVID-19 fear score was 17.70 and was above the midpoint. The present study compared the studies of the general population, it was found that the mean score of fear of coronavirus was almost similar to the study conducted in Russia (17.4),[24] higher than the study conducted in Belarus (16.6)[25] and mean score was lower than the study conducted in Turkey (19.44)[26] and Japan (18.71)[27]. The current study showed a significant association between the sex of the respondents and fear. The mean COVID-19 fear was 16.38 among males and 19.00 among females. Females have shown more fear for any situation as compared to males which are in agreement with the outcome of other studies.[22,28]

Among the seven items, two items "most afraid of coronavirus-19", and "It makes me uncomfortable to think about coronavirus- 19" were significantly associated with sex of the respondents. The findings were similar with the result of study conducted in Brazil.[22] In the study, job cadres were significantly associated with fear of COVID-19. As per the findings of the study, nursing professionals reported the highest level of fear. A study conducted in China has demonstrated the similar findings.[29] Nurses have intense workload at health care center which favor to exposure in risk environment and may lead to stressful and anxious situation.[29,30] In the context of Nepal, nursing professional are generally female unlike other countries. It means that female experienced more level of fear or anxious about coronavirus. It is possible that men hesitate to express their fears of COVID-19, would not follow the preventive sanitary recommendations that the World Health Organization (WHO) uses to manage the spread of the coronavirus infection; minimizing the risk communication efforts of the authorities and media, not following hygiene practices, and social distancing which are risk factors of the pandemic control.[31] The study revealed that there was no any strong significant association between fear of COVID-19 and health workers working in different organizations. For the comparison of this result, we did not find similar studies conducted in each items of fear. Different studies demonstrates that health workers have been under pressure, both psychological and physical along with high infection risk, isolation, insufficient safety equipment, exhaustion, and lack of interaction with the family which affects decision making power and may have a chronic negative impact on overall well- being. It is important to focus on self-care and speak about mental health concerns for the prevention and control of the current pandemic.[28,29]

CONCLUSION

There was a high level of COVID-19 fear among health workers in Nepal during the COVID-19 pandemic. There was significant difference in the mean COVID-19 fear across sex and job cadres of health workers. Sex and type of professionals should be considered while planning psychological intervention among health workers to address the impact of COVID-19 fear.

LIMITATIONS

There might be methodological bias due to online survey technique. Number of total cases of COVID-19 during data collection should be considered during interpretation of the result.

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