Original Research Article

Psychological Impact and Their Associated Factors of Covid-19 Pandemic among Nurses of a Metropolitan City of Central Nepal

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ABSTRACT

Introduction

Covid-19 poses a great challenge to the global health system. The nurses worked in Covid ward and fever clinic act as gatekeepers to the health care system in the public health response to Covid-19 epidemic. The consequences of lockdown, quarantine of Covid-19 pandemic has not only caused physical sufferings but also affected the mental health of the nurses around the globe. This study aimed to assess psychological impact and associated factors of Covid 19 pandemic among nurses working in different level of hospital at Bharatpur Municipality Chitwan, Nepal.

Methods

A cross-sectional descriptive study was conducted among 150 nurses working in different hospitals of Bharatpur Municipality. Non-probability Purposive Sampling Technique was used and Data was collected via online survey using Google Form questionnaire. Covid-19 peritraumatic distress index (CPDI) questionnaire was used to find out psychological impact. Statistical analysis of data was done using SPSS version 20.

Results

Total of 150 nurses were involved in the study where 99.3% were female, 45.3% in the age group of 26-35 years, mean age 27.22±6.612 years, 87.2% bachelor in nursing. Mild to moderate peritraumatic distress was found in 47.33% and 16% of respondents found to have severe distress level. Chi-square test showed that respondents level of knowledge (p=0.003) and presence of chronic disease (p=0.007) was statistically significant with level of distress.

Conclusions

Majority of the nurses had some form of psychological distress. Study highlights the need for counseling for distress and mental health during Covid-19 pandemic. A focus on improving mental wellbeing of nurses should be immediately initiated.

Keywords: Covid-19; nurses; pandemic; peritraumatic distress.

INTRODUCTION

The coronavirus disease 2019 (Covid-19) is currently a threat to the global health in an unprecedented manner. Nepal, a South Asian country, is no exception and is affected by the outbreak with overwhelming effects on its economy and health system.[1]

The Covid-19 pandemic had a massive impact on health care systems, increasing the risks of psychological distress in frontline health professionals.[2] The increasing number of confirmed cases and deaths, overburden in work, inadequate personal protective equipment (PPE) supply, lack of specific treatment, vulnerability to infection and having to stay in quarantine, as well as feelings of being inadequately supported

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in the workplace and home, can contribute to the mental burden of health workers.[3]

Healthcare workers (HCWs) are vulnerable to developing trauma or stress-related disorders in addition to other mental health conditions during large-scale disease outbreaks. If not adequately addressed, these stress could lead to immediate and long-term psychological consequences. In general, HCWs have a higher risk of mental health problems – including a greater risk of suicide, suicidal ideation and self-harm behaviors – than the general population. (4) During a pandemic, they are vulnerable to mental health problems because of the high risk of infection, increased work stress and fear of spreading the virus to their families.[5]

A timely assessment of mental health status and mental health needs of health workers will help to respond and reduce psychological distress earlier, improve their mental wellbeing and increase the work performance.[6] Healthcare workers like nurses' are the primary group who come in contact with patients, an important source of exposure to infected cases in healthcare settings. Corona Virus Disease 2019 (Covid-19) pandemic has brought all the health care professionals including nurses to work as a frontline member, which may bring threat to mental wellbeing.[6,7] However, evidence regarding the psychological impact and its associated factors of Covid 19 among nurses is not available in Nepal, in this context, this study aimed to evaluate psychological impact and its associated factors of Covid among nurses working in Bharatpur, Nepal.

METHODOLOGY

Descriptive cross-sectional survey was used to assess the psychological impact and its associated factors of Covid 19 pandemic among nurses working in different hospital of Bharatpur Municipality, Chitwan District. Non-probability Purposive Sampling Technique was used and Data were collected via online survey using Google Form questionnaire. Data were collected for one-month duration from June 1, 2020 to July 1, 2020. Ethical Clearance was taken from Institutional Review Committee (IRC) Bharatpur Hospital Chitwan. The instrument used for data collection consisted of two sections (i) Covid-19 peritraumatic distress index (CPDI),[8] a validated tool (Cronbach's alpha 0.95) consisting of 24 items that includes anxiety, depression, specific phobias, cognitive changes, avoidance and compulsive behavior, physical symptoms and loss of social functioning. The total score for CPDI is 96 (normal: 0-24; mild to moderate PD: 25-48; severe PD: 49-96) and (ii) semi structure self-administered questionnaire developed by researcher to identify the associated factors. Data analysis done by using SPSS version 20. Descriptive statistics used to identify the level of psychological distress and inferential statistics (chi- square test) was done to find out associated factors.

RESULTS

Among 150 respondents 99.3% were female, 45.3% were in the age group of 26-35 years, mean age was 27.22±6.612 years, 87.2% had qualification of bachelor and above, 59.3% married and 46.7% had worked in general ward, 38.7% have got training on Covid 19 and 80% have more than 1-year work experience. The sociodemographic characteristics of the respondents is shown in table 1.

Table 1. Sociodemographic Characteristics of Respondents n =150

Variables	Frequency	Percent
Gender		
Male	1	0.7
Female	149	99.3
Age in years		
Less than & equals to 25	67	44.7
More than 25	83	55.3
Level of Education		
ANM & PCL Nursing	53	12.8
Bachelor & above	97	87.2
Marital status		
Married	89	59.3
Unmarried	60	4.0
Widow	1	0.7

Working department		
Fever clinic or Covid ward	12	8.0
General ward	70	46.7
Emergency	8	5.3
Critical care unit	60	40.0
Training on Covid 19		
Yes	58	38.7
No	92	61.3
Working experience		
Less than 1 year	30	20
More than 1 year	120	80

About half (47.33%) of the respondents experienced mild/moderate level of Covid Peritraumatic Distress whereas, 16% of the respondents reported severe level of peritraumatic distress.
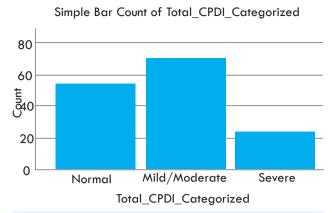

Figure 1. Level of peritraumatic distress (Psychological Impact) among Nurses n=150

Table 2. Statement related to peritraumatic distress index (CPDI)						
Statements	**Percentage**					
	0	**1**	**2**	**3**	**4**
1.	Compared to normal times, I felt more nervous and anxious.	10	16.7	41.3	12.7	19.3
2	I felt insecure and bought lot of masks, medications, sanitizers, gloves and other home supplies.	8	20.7	38	6.7	26.7
3	I can't stop myself from imagining myself and my family being infected and feel terrified and anxious about it.	10.7	14.7	34	11.3	29.3
4	I feel empty and helpless no matter what I do?	32.7	14.7	34	8	10.7
5	I feel sympathetic to the Covid-19 patient and their families. I feel sad about them	6	5.3	17.3	18.7	52
6	I feel helpless and angry about people around me, such as the governors and media?	14	13.3	33.3	18	21.3
7	I am losing faith in the people around me	30.7	16	34.7	12	6.7
8	I collect information about Covid-19 all day. Even it's not necessary I can't stop myself.	17.3	15.3	23.3	17.3	26.7
9	I will believe the Covid-19 information from all the sources without any evaluation.	46	14.7	22	8.7	8.7
10	I would rather believe in negative news about Covid-19 and be skeptical about the good news.	42.7	15.3	23.3	8	10.7
11	I am constantly sharing news about Covid 19 (mostly negative)	48	14.7	23.3	4.7	9.3
12	I feel empty and helpless no matter what I do?	32.7	14.7	34	8	10.7
13	I feel more irritable and have frequent conflict with my family.	45.33	16	27.3	7.3	4.1
14	I feel tired and sometimes even exhausted.	18	23.3	36.7	11.3	10.7
15	Due to feelings of anxiety, my reaction are becoming sluggish.	36.7	25.3	24.7	6.7	6.7
16	I find it hard to concentrate.	31.3	20	31.3	127	4.7
17	I find it hard to make any decisions.	32.7	19.3	34	7.3	6.7
18	During this Covid-19 outbreak, I often fee dizzy, have back pain or chest discomfort.	55.3	18.7	17.3	4	4.7
19	I feel uncomfortable when communicating with others.	50	14	18.7	9.3	8
20	Recently I rarely talk to my family.	56.7	9.3	21.3	6	6.7
21	I cannot sleep well. I always dream about myself or my family being infected by corona virus.	57.3	16.7	16.7	5.3	4
22	I lost my appetite.	60.7	14.7	18.7	5.3	.7
23	I have constipation or frequent urination	64	17.3	11.3	4	3.3
24	During this Covid-19 outbreak, I often feel stomach pain, bloating or other stomach discomforts.	63.3	14.7	14	4	4

Table 4. Association between Psychological Impact (CDPI) Level and Selected Factors

Factors		p Value

Age
  Less than 25
  More than 25
	1.201	0.549

Working ward
  Fever and Covid Ward
  Other than fever and Covid ward
	3.247	0.777

Training received on Covid 19.
  Yes
  No
	3.575	0.167

Types of family
  Nuclear
  Joint and Extended
	1.201	0.549

Having chronic illness
  Yes
  No
	9.802	0.007

Level of Education
  ANM & PCL
  Bachelor & Above
	6.787	0.003

Table shows that Covid 19 peritraumatic distress level was statistically significant with respondent's level of Education and Presence of Chronic disease.

DISCUSSION

Covid-19 pandemic pose a great burden on health care systems worldwide leading to great psychological pressure on nurses treating the patients. Evidences have showed the rise in psychological problems including stress, anxiety, depression, posttraumatic stress disorder worldwide among the health care workers.[9-11]

In this study about half (47.33%) of the respondents experienced mild/moderate level of Covid Peritraumatic Distress whereas, 16% of the respondents reported severe level of peritraumatic distress. However, study conducted by Neupane MS et al, had 37.6% of nurses with high level of stress and 54.7% of nurses had moderate level of stress.[7] In similar studies done in Brazil where mild to moderate level of peritraumatic distress was found among 52.9% (N=654).[12] Similar type of studies done on Nepalese community people revealed that Mild to moderate peritraumatic distress was found among 17.82% and Covid-19 Peritraumatic Distress index score was 14.67 (SD± 9.09) which was contrast to present study.[13] A study conducted among nursing staffs in Taiwan had normal scores in nearly two-thirds (61.8%) and only 3.4% had scores indicating severe distress.[14]

This study shows that Covid 19 peritraumatic distress level was statistically significant with respondent's level of Education (p=0.003) and Presence of Chronic disease (p=0.007) as factors affecting psychological impact among nurses. A study conducted by Khanal P et al showed that Stigma faced by health workers and history of medication for mental health was significantly associated with experiencing symptoms of anxiety and inadequate precautionary measures in the workplace was significantly associated with higher odds of exhibiting symptoms of anxiety.[6]

The study has some limitations that could make generalization of the findings difficult. First, this study was conducted during the early phase of pandemic, thus the mental health outcomes might still reflect conditions existing before the pandemic, and second there might have been the introduction of selection bias, because the questionnaires were distributed non-randomly via online survey using google forms.

CONCLUSIONS

Majority of nurses working as frontline health workers had significant distress level on Covid

Peritraumatic Psychological Distress scale. This has immediate and long term consequences in their health and job performance. A focus on improving mental wellbeing of nurses should be immediately initiated to protect their wellbeing and improve work performance and strengthen health system.

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