

COVID Stress among Nepal Police Officers

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ABSTRACT

Background: In Nepal, the stress factor is exacerbated by a large number of police officers working away from home with less family contact, a hectic work schedule in a pandemic situation, companions suffering from illness and updates on additional cases with rising mortality rates, and a lack of access to Personal Protection Equipment. The main aim of this study was to identify the prevalence of COVID stress among Nepal police officers working during pandemic.

Methods: We conducted a cross-sectional study among police officers (n=1526) working during pandemic in Province X Nepal. Semi-structured questionnaire was administered using google form. COVID Stress Scale -36 (CSS-36) was used to assess the stress in officers. Data collection was done after obtaining ethical approval. Data cleaning was done using a python script and then was exported to Ms. Excel for graph analysis.

Results: The highest percentage was seen in the xenophobia subscale (24.63%), followed by contamination (20.10%) and compulsive checking (19.21%). Comparing socio-demographic variables, 18-27 aged groups including male officers and unmarried groups had experienced high COVID stress.

Conclusions: Most of the officers feared from the foreigners perceiving them the main source of COVID-19. Fears about getting contaminated related to COVID-19 was also seen high. There is a need to assess psychological issues and provide social support to police officers during this pandemic situation.

Keywords: COVID-19; police officer; stress; Nepal

INTRODUCTION

The COVID-19 pandemic has impacted front liners' mental health triggering, anxiety, insomnia, stress, or depression.¹ As the community responds to COVID-19, committed physicians, nurses, mental health practitioners, police officers and transportation professionals serves as front liners.²

Police work continues to be considered inherently difficult during this pandemic because of the personal possibility of exposure to conflict and abuse and day to day participation in a number of traumatic events.³ It is important to pay attention to the mental and emotional wellbeing of front liners operating through this pandemic.⁴ There is ample evidence to document the job-related stress among police officers due to long working hours, stressful work-related incidents, lack of appropriate leaves, etc.^{3,5} High rates of mental stress have been reported in the police staff.⁶⁻⁸

Thus, the aim of our study was to assess the prevalence of stress among Nepal police during pandemic using

COVID STRESS SCALE-36.

METHODS

A cross-sectional descriptive study was conducted among 1526 Nepal police officers of Province X working on the frontline. Data were collected from August 2020 to September 2020. Ethical approval was taken from the Nepal Health Research Council. (Ref no. 2811) Police constable, police head constable, assistant sub-inspector, sub-inspector, and police inspector working during the pandemic in Province 3 (Kathmandu, Bhaktapur, Lalitpur, and Hetauda), Nepal were included in the study. In these posts, there are altogether 13164 police in Province 3.

We calculated the sample size using 95% C.I., 50% prevalence. As the total number of the study population was 13164, we used the finite population formula to calculate the sample size. Taking 10% non-respondent rate, the total calculated sample size was 1514. However, 1539 data were collected conveniently. Excluding redundant data and missing values, total 1526

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samples were analyzed in the study.

In order to collect the data, we used Google form as a platform. First, each police inspector employed in Kathmandu, Bhaktapur, Lalitpur, and Hetauda were given an orientation on the questionnaire in the Metropolitan office located at Kathmandu. Those police inspectors collected the data from their respective areas using google forms.

The data used was imported from a survey among Police Frontliners during the phase of the COVID-19 pandemic. The data is based on the COVID Stress Scale⁸ with a total of 36 features based on personal opinions and a few separate demographic data of individuals.

CSS uses a Likert scale ranging from 0-4 where, 0 = Not Likely, 1 = Least Likely, 2 = Moderately Likely, 3 = Likely, 4 = Most Likely

Domains of Covid stress scale -36.

COVID Danger	Fear of the dangerous nature of COVID-19.
COVID Socio-economic consequences	Fears concerning the personal impact of COVID19 on social and economic life.
COVID Xenophobia	Fears that the source of COVID-19 are foreigners.
COVID Contamination	Fears about getting contaminated related to COVID-19
COVID Traumatic Stress	Symptoms of traumatic stress related to COVID-19
COVID Compulsive Checking	COVID-19-related checking e.g. checking social media or news

For using the Nepali Version of COVID Stress Scales, the English version was translated with the help of 3 experts conducting back translation. 3 experts translated the scale into the Nepali language in their own words. Among these 3 translated versions, an easily understandable Nepali version with preference to the consistency of its originality was chosen which was then translated back into English. This selected Nepali version was used during pretesting. We conducted pretesting on 74 Nepal Police Officers working at Frontline during this pandemic in Province 2. Both Nepali and English version of CSS were given to fill up to each police. Data were entered separately for Nepali and English version CSS with an interval of 3 days. All 6 domains of Nepali and English versions were highly correlated. Cronbach`s alpha was calculated and it could be seen that all of the coefficients were > 0.7, which indicated good reliability.

The analytics for the data was done in 3 steps: Extract,

Transform, and Load. The data was extracted in two processes. First, a survey was conducted using a Google Form, with the results being converted to Comma-Separated Values (CSV) format for further processing. The data transformation was completed in three phases. First, unwanted observations, such as duplicated data or missing values of data, were removed then unwanted outliers were managed by either categorizing them or eliminating them entirely, afterward inconsistent data was processed through a python script to manipulate strings and variables to a consistent format. The cleansed data was then filtered for the exact columns that were needed for the study. Individual scales for the data were then split into distinct datasheets for Age, Marital Status, and Gender.

The individual data sheet was divided into six subsections, each including one of the six COVID-Stress subscales. The data was divided into six sub-scales, each of which was based on a Likert scale ranging from 0-4. The total of each individual`s observations was computed using the stress scale`s six sub-sections. The number of Likert scales that represented 3 or 4 were counted for each of the 36 questionnaires that reflected all of the 6 subscales. The total number of observations was used to determine the percentage ratio of the previously estimated count. Each questionnaire from each subscale was put together and then averaged, resulting in 6 subscales with exactly 6 questionnaires. The stress percentage generated by each subscale was indicated by the average of the subscales.

The data visualization was done as per the three features of each observation namely age, marital status and gender. For each of the features, a method was used to determine the role of the stress subscale for the exact sub-feature of the above 3 main features. First the count of the sub-feature (e.g.: married, unmarried and widowed sub-features under marital status) was calculated. Secondly the count for each of the 6 subscales that determined the individual sub-feature were also calculated. The ratio for each of the sub-feature was calculated and were compared against each other to determine which sub-scale played an important role for which sub feature. Lastly the average for each classified feature was calculated. The processed data was then loaded and visualized using a line graph (age) and column chart (marital status and gender).

During data collection, the information was collected in the google form where the participants had given their personal information as identification. As the data was entered in our system, the names of the participants

were removed and coded for confidential issues.

RESULTS

The highest percentage was seen in the xenophobia subscale (24.63%), followed by contamination (20.10 %) and compulsive checking (19.21%) (Table 1).

Sub Scale	Ratio	Percent (%)
Danger subscale	0.1802	18.0209
Socio-economic consequences subscale	0.0871	8.7155
Xenophobia subscale	0.2463	24.6395
Contamination subscale	0.2010	20.1070
Traumatic Stress subscale	0.0483	4.8383
Compulsive checking subscale	0.1921	19.2114

According to Table 2 and Figure 1, the ratio of xenophobic sub-scale was the highest among most of the age group

whereas the ratio of traumatic sub-scale was the lowest in all the age group. The average of score by count ratio was high in the age group of 18-27 years (7.4010) indicating high COVID stress.

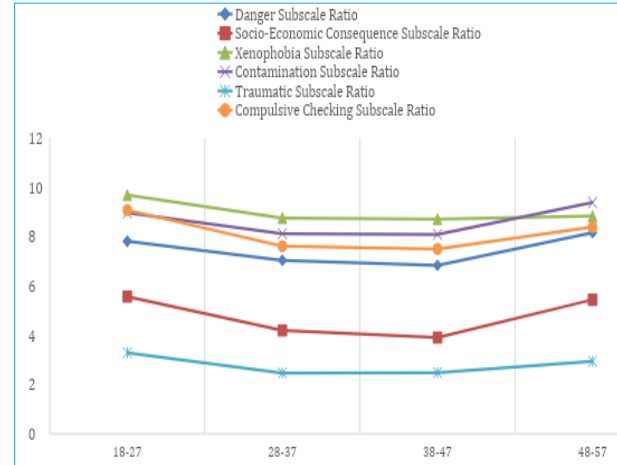


Figure 1. Age category for different sub-scale.

Age Range	Count of Age	Danger Sub-Scale Ratio	Socio-Economic Sub-Scale Ratio	Xenophobia Sub-Scale Ratio	Contamination Sub-Scale Ratio	Traumatic Sub-Scale Ratio	Compulsive Checking Sub-Scale Ratio	Average of Score by count ratio
18-27	566	7.8144	5.5724	9.6837	8.9681	3.2897	9.0777	7.4010
28-37	723	7.0401	4.1977	8.7565	8.1244	2.4702	7.6141	6.3672
38-47	219	6.8356	3.9086	8.7123	8.0913	2.4840	7.5022	6.2557
48-57	18	8.1666	5.4444	8.8333	9.3888	2.9444	8.3888	7.1944

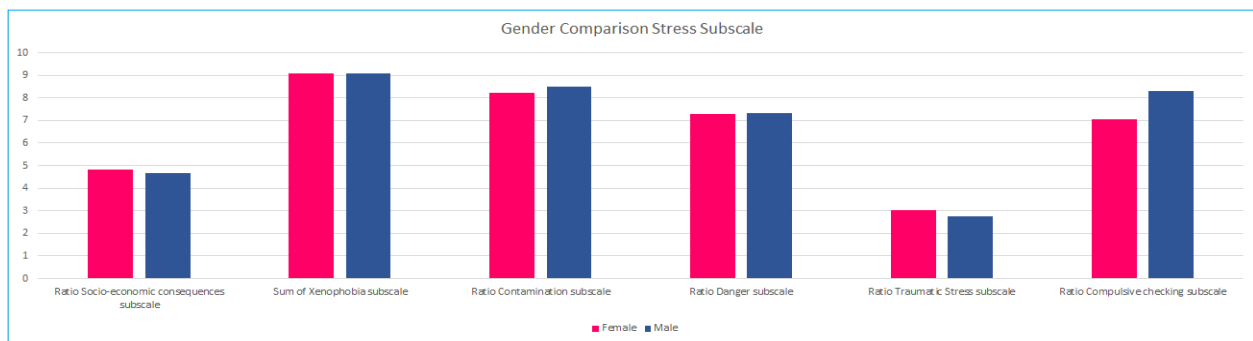


Figure 2. Gender for seven sub scale.

Gender	Ratio Socio-economic consequences subscale	Ratio of Xenophobia subscale	Ratio Contamination subscale	Ratio Danger subscale	Ratio Traumatic Stress subscale	Ratio Compulsive checking subscale	Average of Score by count ratio
Female	4.8080	9.0757	8.2323	7.3030	3.0404	7.0606	6.5867
Male	4.661	9.0978	8.4796	7.3125	2.7432	8.3125	6.7679
Ratio (Female to Male)	1.031	0.9975	0.9708	0.9987	1.1083	0.8493	0.9732

Table 4. COVID Stress according to marital status.

Marital Status	Count of Marital Status	Ratio Danger subscale	Ratio Socio-economic consequences subscale	Ratio Xenophobia subscale	Ratio Contamination subscale	Ratio Traumatic Stress subscale	Ratio Compulsive checking subscale	Average of Score by count ratio
Married	1146	7.0488	4.3551	8.7923	8.2434	2.6867	7.9144	6.5068
Unmarried	377	8.1193	5.6578	9.9973	9.0663	3.0583	8.8859	7.4641
Widow/Widower	3	6	6.3333	11.3333	8.6666	4.3333	5.6666	7.0555

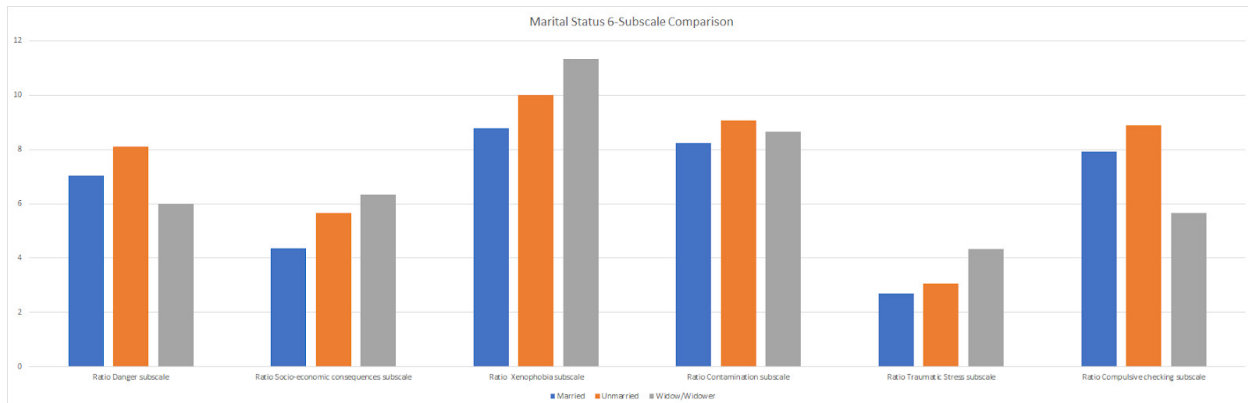


Figure 3. Bar graph representing marital status for seven sub scale.

There were 1328 Males and 198 Females. In table 3 and figure 2, we can see that there wasn't a major gap between men and women. However, the compulsive checking subscale was seen high in males compared to females with 15 % differences.

Comparing with marital status, an average of score by count ratio was high among the unmarried group (7.4641) indicating high COVID stress (Figure 3 and Table 4). We can see the group of widow/widower has a total count of only 3 observation. The data given by these observations might not be relevant due to uneven ratio as compared to other groups. So, they are considered as the outliers for this study.

DISCUSSION

This study aimed to examine the prevalence of stress that is related to COVID-19 pandemic among the working population in Nepal Police using the COVID-stress scale. In this study, a significant proportion of participants reported xenophobia, feeling of danger, fear of contamination and compulsive checking behavior. In this study, in the contamination domain, the participants (20.73) reported to have fear of contamination through their surroundings and in danger domain, 18.02% reported being scared of the virus, fear of being transmitted, or not being able to keep one's family safe.

The sense of personal hazard may be exacerbated by the fact that COVID-19 is transmissible from human to human^{9,10} associated with high morbidity and potentially fatal.¹¹ In addition, predictable shortages of supplies and a growing influx of reported and real COVID-19 cases lead to health care workers' stresses and concerns. In a study conducted among 2567 police officers (77% male) from Austria, Germany, Switzerland, the Netherlands, and Spain participated at three measurement points per country in spring ,2020. European Police officers' risk of infection and deficient communication emerged as main stressors. Despite substantial variance between countries, 66% of the variance occurred between individuals. Sex, work experience, stressor appraisal, emotion regulation, and preparedness significantly predicted strain.¹² Similarly, in India a study conducted among traffic police showed disorientation of working schedule, fear of being vulnerable to disease, the pressure of maintaining law and orders during lockdown increased stress level. The study identified sleep discontinuation, mid-sleep alteration, a rise in depression, plus stress and anxiety among traffic police staff that affected their chronobiological environment.¹³ Our study also showed that 19.21 % of the participants had compulsive checking behavior.

In the domain of xenophobia, 24.63% reported fear of foreigners. During the spread of infectious illnesses,

xenophobic attitudes become all the more apparent. The disease-avoidance model offers one such interpretation. It was shown that persistent and contextually aroused feelings of susceptibility to disease motivated negative reactions to foreign immigrants in line with the disease-avoidance paradigm.¹⁴ Prompt changes such as self-quarantine, social distancing, the proliferation of rumors across social media, the pressure of disinformation and travel restrictions contributed to anxiety and tension, leading to concern and restlessness that adversely affects well-being. Similarly, the research conducted at the peak of the H1N1 swine-flu outbreak published a similar result. They found that vaccinated participants showed less discrimination against immigrants when threatened with disease than unvaccinated participants did.¹⁵

Police officers much like frontline health workers are dealing with an unknown situation. In a study in Ethiopia, the prevalence of perceived stress among participants was 126 (51.6%). nurse professionals (AOR=8.2, 95% CI 2.69, 24.74), and pharmacist professionals (AOR=4.8, 95% CI, 1.25, 18.64) were found to have a strong significant association with the perceived stress of coronavirus disease.¹⁶ Similarly, in a study conducted among health workers working as frontlines and non-medical workers in China, frontline medical workers had higher rates of any mental problem (52.6% vs. 34.0%, adjusted OR=1.88, 95% CI=1.57-2.25), anxiety symptoms (15.7% vs. 7.4%, adjusted OR=1.95, 95% CI=1.46-2.61), depressed mood (marginally insignificant; 14.3% vs. 10.1%, adjusted OR=1.32, 95% CI=0.99-1.76) and insomnia (47.8% vs. 29.1%, adjusted OR=1.96, 95% CI=1.63-2.36) than non-frontline medical workers. Frontline medical workers had more mental problems but comparable help-seeking behaviors and treatment for these problems than non-frontline medical workers. These findings highlight the timely mental support and intervention for medical workers, especially for those on the frontline.¹⁷ This was supported by another cross-sectional, survey-based, region-stratified study¹⁸ that collected demographic data and mental health measurements from 1257 health care workers in 34 hospitals from January 29, 2020, to February 3, 2020, in China. The study revealed frontline health care workers engaged in the direct diagnosis, treatment, and care of patients with COVID-19 were associated with a higher risk of symptoms of depression (OR, 1.52; 95% CI, 1.11-2.09; $P = .01$), anxiety (OR, 1.57; 95% CI, 1.22-2.02; $P < .001$), insomnia (OR, 2.97; 95% CI, 1.92-4.60; $P < .001$), and distress (OR, 1.60; 95% CI, 1.25-2.04; $P < .001$).

Our study included socio-demographic variables such as age, gender, and marital status, where 1827 aged and unmarried groups experienced high COVID stress. A study conducted by Kurtz shows that most police stress studies fail to resolve an underlying gender issue. The findings of this study show that police officers' stress and burnout are not solely a response to a high-stress setting, but are rooted in the gender structure and police processing.¹⁹ There were not much gender differences overall among the subscales in our study. However, there were some differences between men and women officers in the compulsive checking subscale that showed high stress in men.

With COVID-19, police officers see up close the trauma and experience stress cognitively, mentally, psychologically and emotionally. Since police officers are the first responder to deal with public high-risk situations, there is always a threat they have to face, hence always having the fear of being transmitted or transmitting the disease to their family.

There were some limitations in our study. Province 3 was the only province in which the study was carried out. Including police officers from all over the country would have had a more generalized implementation. Also, due to the restrictions of pandemic this study was limited to online survey methods and self-reported measurement.

CONCLUSIONS

Fear of foreigners followed by the fear of contamination and compulsive checking were high in our study. Although stress from these types of circumstances cannot be fully eliminated, improving individual coping resources through training might allow officers to cope with the stress they experience.

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Competing interests: None declared

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