

## Psychological Impact among Frontline Police Personnel of Kathmandu Metropolitan City in Nepal: A cross-sectional Study

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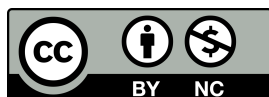
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### ABSTRACT

**Background:** A job of police officer is such that they often have to undergo the mental anguish and pain internally. This study aimed to assess the psychological impact among frontline police personnel of Kathmandu Metropolitan City in Nepal.

**Methods:** A cross-sectional study was conducted among randomly sampled frontline police personnel of Kathmandu Metropolitan City. A self-administered DASS questionnaire was used to assess the psychological impact. Total 373 sample was derived using the formula for proportion. A self-administered DASS questionnaire was used. Data were analyzed on SPSS 20.

**Results:** The prevalence of depression was 67.8%, of these, majority (29%) of the frontline police personnel were moderately depressed, followed by mildly depressed (20.1%), severely depressed (11.3%), and extremely severely depressed (7.5%). Similarly, the prevalence of anxiety was 73.5%, given which mildly anxious (9.4%), and moderately anxious (32.4%), severely anxious (15%), and extremely severely anxious (16.6%). Likewise, that prevalence of stress was 23%, where the low proportion of them had mild stress (8.6%), stress (6.7%), severe stress (4.8%) and extremely severe stress (2.7).

**Conclusion:** Due to their sensitive exposures and nature of work, front-line workers, such as police officers, have grown more prone to depression, anxiety, and stress. Given that policing is a physically, emotionally, and intellectually demanding profession, it is vital to equip officers with adequate psychological assistance.

**Keywords:** Anxiety; Depression; Frontline police; Stress; Kathmandu; Psychological.

### INTRODUCTION

One of the most stressful jobs is that of a police officer. Workplace stress and trauma exposure have been linked to an increased chance of developing depressive symptoms. Greater early trauma exposure and worse self-worth throughout training might be key risk factors for duty related depression.<sup>1</sup> The most dangerous and unstable individuals of our society are forced to deal with the police. They are summoned to confront a situation that most of us would avoid.<sup>2</sup> As a result, police personnel are frequently confronted with life-threatening

and unpredictable circumstances that need fast thought and rational action. Professional consequences, community punishments, and possibly legal action may follow from failure to adequately deal with these critical situations.<sup>3</sup> Police departments were structured as paramilitary bureaucracies, with defined lines of command and specific tasks assigned to each employee inside the institution.<sup>4</sup> Long working hours, stressful work-related occurrences, a lack of adequate leaves, and other factors all contribute to job-related stress

among police personnel.<sup>5</sup> Personnel like police officers working in frontline become highly prone to depression, anxiety, suicidal thoughts, post-traumatic stress disorder .<sup>6</sup> Keeping all these in mind, and considering the police work to be physically, emotionally, and mentally taxing, taking appropriate steps to mitigate psychological support to police staff is highly essential. Information about the mental health condition of police personnel of Nepal is very limited. So, this study was conducted to assess the psychological impact among frontline police personnel of Kathmandu Metropolitan City in Nepal.

**METHODS**

This was a non-interventional cross-sectional study among front police personnel of Kathmandu Metropolitan City of Nepal, and data were collected from May 29<sup>th</sup> to April 5<sup>th</sup> 2021. There are 14 police stations within Kathmandu Metropolitan City, two police stations were randomly selected from each circle (eastern, western, northern and southern) of City and a total of eight police stations were identified for the study. All front-line police personnel of those eight police stations who were on duty during this study were the study population. A list of total 3,138 front line police personnel of these eight police stations of Kathmandu Metropolitan City was prepared. The sample size has been derived by using the Yamane.<sup>7</sup> formula:  $n = \frac{z^2pq}{e^2}$  (n = required sample size, N= population size (3,138), e = level of precision (e=0.05 at 95% confidence level). With the addition of a five percent non-response rate, the total sample was 373. Desired numbers of respondents from each police station were identified through Probability Proportional to Size (PPS) technique. Finally, a simple random sampling technique was used to select respondents from eight sampled police stations. Front line police personnel of these 8 police stations, willing to participate and present on the study schedule were all included. The non-response rate was zero.

A set of data collection tool was developed, pretested, translated in Nepali language and finalized. Part-1 of the tool was related to socio-demographic features and coping behavior of the respondents. Part-2 of the tool included Depression, Anxiety and Stress Scale - 21 items (DASS - 21) as a data collection tool for the study.<sup>8</sup> DASS-21 is a set of self-report Likert type scale designed to measure the level of depression, anxiety, stress and this tool scores each of the given four rating scales as “0” (not at all) to “3” (most of the time) for every 21 items. It consists of 21 items grouped in 3 dimensions i.e., Stress (normal=0-14, mild=15-18, moderate=19-25, severe=26-33, extremely severe=34+), Anxiety (normal=0-7, mild=8-9, moderate=10-14, severe=15-19, extremely severe=20+), and Depression (normal=0-9,

mild=10-13, moderate=14-20, severe=21-27, extremely severe=28+). Scores for depression, anxiety and stress has been calculated by summing the scores for the relevant items and scores on the DASS-21 has been also multiplied by 2 to calculate the final score. Literature has also suggested that DASS-21 may be utilized among diverse groups and it’s a legitimate and useful tool that may distinguish between depression and anxiety.<sup>9</sup> Additionally, the previous study also suggested that the internal consistency and also the scale of DASS-21 is high, ranging from 0.70 for the strain subscale to 0.88 for the general scale. Score on each of the three sub-scales, and thus the combinations of two or three of them were proficient to detect the common mental disorders of depression and anxiety with a sensitivity of 79.1 % and a specificity of 77.0 % at the optimal bring to a halt of >33.<sup>10</sup>

Data collection tool were self-administered by the respondents. The aim of the study was explained to the respondents before data collection. Verbal consent was been obtained from the respondents and ethical approval was received from YHSA-IRC (Yeti Health Science Academy-Institutional Review Committee). Respondents were instructed to return the questionnaire after completion. The collected data were edited, reviewed, and checked for completeness. To assure anonymity, code numbers got on completed questionnaires after they were returned to the investigator. Statistical Package for Social Sciences (SPSS) version 20 was accustomed to analyze the data. Proportion and comparative analysis were used for descriptive analysis of data.

**RESULTS**

A total of 373 police personnel were on duty during the participation in the survey. Out of the total 373 respondents, 56.0 percent were 20-29 years aged, 46.4 percent had completed higher secondary level education, 55.8 percent were living in police quarter and a large proportion (58.4%) of the respondents were working in constable position (Table 1).

**Table 1: Socio demographic distribution of respondents**

Characteristics	Frequency	Percent
<b>Age in completed year</b>		
20-29	209	56.0
30-39	127	34.0
40-49	37	9.1
<b>Sex</b>		
Male	316	84.7
Female	57	15.3
<b>Educational status</b>		
Primary level (up to grade 5)	22	5.9
Secondary level (grade 6-10)	99	26.5

	Frequency	Percent
Higher Secondary level (grade 11-12)	173	46.4
Graduate and above	79	21.2
<b>Marital Status</b>		
Unmarried	127	34.0
Married	246	66.0
<b>Household Ownership</b>		
Own house	47	12.6
Rented house	118	31.6
Police quarter	208	55.8
<b>Position in Job</b>		
Followers	4	1.1
Recruit	1	0.3
Police constable	218	58.4
Police head constable	72	19.3
Assistance sub inspector of police	41	11.0
Sub inspector of police	26	7.0
Police inspector	11	2.9

Table 2 shows the responses and scores for each of the given four rating scales as “0” (not at all) to “3” (most of the time) for every 21 items. The prevalence of depression, anxiety and stress among frontline police personnel was assessed based on DASS-21. Cut off scores and level for this study is: stress (normal=0-14, mild=15-18, moderate=19-25, severe=26-33, extremely severe=34+), anxiety (normal=0-7, mild=8-9, moderate=10-14, severe=15-19, extremely severe=20+), and depression (normal=0-9, mild=10-13, moderate=14-20, severe=21-27, extremely severe=28+).

Table 3 shows the prevalence and level of depression, anxiety and stress among the respondents. Out of 373 respondents, 32.2 percent of the respondents were normal (not depressed). Study results also screened that the majority of the respondents were moderately depressed (29.0%) followed by mild depression (20.1%), severe depression (11.3%), and extremely severe depression (7.5%). One of the fourth (26.5%) of the respondents were normal (not scored as anxiety). However, one third (32.4%) of them were screened for mild level anxiety. Table 3 also disclosed that a remarkable proportion (77.2%) of the respondents screened for not having stress (normal) and very low proportion of them had mild (8.6%), moderate (6.7%) and severe (4.8%) level of stress.

Table 3: Prevalence and level of depression, anxiety and stress

Category	Depression	%	Anxiety	%	Stress	%
Normal	120	32.2	99	26.5	288	77.2
Mild	75	20.1	35	9.4	32	8.6
Moderate	108	29.0	121	32.4	25	6.7
Severe	42	11.3	56	15.0	18	4.8
Extremely Severe	28	7.5	62	16.6	10	2.7
Total	373	100	373	100	373	100

Table 4 is related to the coping behavior as adopted by the respondents. A significant proportion of the respondents (93.7%) adopted some types coping behavior/activities. Physical exercise (28.7%) was the mostly adopted coping behavior. In addition, connecting with virtual support group (17.4%), listening to music (16.8%) and doing Yoga (11.2%) were other coping behaviors as carried out by the respondents.

Table 4: Coping behaviors adapted by the respondents

Characteristics	Frequency	Percent
<b>Involvement in some coping behavior/ activities (N=373)</b>		
Yes	349	93.6
No	24	6.4
<b>Types of coping behaviors*</b>		
Physical Exercise	284	28.7
Talk Therapy	73	7.4
Yoga	111	11.2
Faith based practice/ spirituality	46	4.7
Meditation	49	5.0
Connecting with virtual support group	172	17.4
Listening to music	166	16.8
Dancing	76	7.7
Others	11	1.1

\*Multiple responses

## DISCUSSION

The police personnel are the main driving force and have been continuously helping the government in maintaining the laws and code of conduct. The psychological or mental health issues of the frontline police personnel who have been contributing by actively engaging all in maintaining the law and order like controlling of trafficking to regulating lockdown are highly neglected and underrated.<sup>11</sup> The bulk of the police participants

**Table 2 Depression, anxiety and stress scale-21 (DASS21) related responses**

Responses	Did not apply at all No. (%)	Applied to some degree No. (%)	Applied to a considerable degree No. (%)	Applied to most of the time No. (%)
I found it hard to wind down	53(14.2)	234(62.7)	62(16.6)	24(6.4)
I was aware of dryness of my mouth	100(26.8)	191(51.2)	59(15.8)	23(6.2)
I couldn't seem to experience any positive feeling at all	78(20.9)	171(45.8)	107(28.7)	17(4.6)
I experienced breathing difficulty	141(37.8)	155(41.6)	54(14.5)	23(6.2)
I found it difficult to work up the initiative to do things	105(28.2)	178(47.7)	72(19.3)	18(4.8)
I tended to over-react to situations	149(39.9)	138(37.0)	67(18.0)	19(5.1)
I experienced trembling	188(50.4)	131(35.1)	32(8.6)	22(5.9)
I felt that I was using a lot of nervous energy	94(25.2)	194(52.0)	59(15.8)	26(7.0)
I was worried about situations in which I might panic and make a fool of myself	142(38.1)	167(44.8)	46(12.3)	18(4.8)
I felt that I had nothing to look forward to	186(49.9)	134(35.9)	32(8.6)	21(5.6)
I found myself getting agitated	101(27.1)	225(60.3)	38(10.2)	9(2.4)
I found it difficult to relax	106(28.4)	181(48.5)	64(17.2)	22(5.9)
I felt down-hearted and blue	102(27.3)	205(55.0)	49(13.1)	17(4.6)
I was intolerant of anything that kept me from getting on with what I was doing	129(34.6)	172(46.1)	59(15.8)	13(3.5)
I felt I was close to panic	145(38.9)	163(43.7)	52(13.9)	13(3.5)
I was unable to become enthusiastic about anything	107(28.7)	182(48.8)	58(15.5)	26(7.0)
I felt I wasn't worth much as a person	192(51.5)	127(34.0)	36(9.7)	18(4.8)
I felt that I was rather touchy	106(28.4)	194(52.0)	53(14.2)	20(5.4)
I was aware of the action of my heart in the absence of physical exertion	163(43.7)	152(40.8)	31(8.3)	27(7.2)
I felt scared without any good reason	125(33.5)	184(49.3)	47(12.6)	17(4.6)
I felt that life was meaningless	267(71.6)	78(20.9)	18(4.8)	10(2.7)

in this research, 84.7 percent, were men, while 15.3 percent were women. A total of 29% of those who took part in the study had moderate depression, 11.3 percent had severe depression, and 7.5 percent had extremely severe depression. Similarly, 16.6% of participants had extremely severe anxiety, while 15% of respondents had severe anxiety. Thirty two percent of those surveyed experienced moderate anxiety. Similarly, 4.8 percent of responders reported severe stress, while 6.7 percent and 2.7 percent of police officers reported moderate and extremely severe stress, respectively, indicating that a significant proportion of officers require immediate care. These findings may point to the necessity for psychiatric assistance for police officers who have experienced mental traumas which might be the result of various traumatic exposures of police personnel. In addition, urgent need for the screening, proper diagnosis and management

of psychiatric issues in police personnel is required. In a similar study that was conducted among police officers in China, the female participants (15.8%) were less than the male (84.2%) which turns out to be similar to our study. In the Chinese study, the psychological impact includes depression and anxiety and is measured by two different statistical tools that is, PHQ-9 and GAD-7 respectively which is contrasted to my study as DASS 21 was used as a tool to assess the psychological impact. In the Chinese study, 12.17% of the police personnel had moderate to severe depression and 8.79% had moderate to severe anxiety.<sup>12</sup> In comparison to our study, police personnel in the Chinese study had comparatively low depression and anxiety.

Yet another study was conducted in three metropolitan cities of Pakistan among the HCWs using DASS-21 to



assess the mental health wellbeing. The frequency of DAS was seen to be 10.1%, 25.4% and 7.3% respectively. This study has admitted that the depression was significantly associated with the profession ( $p < 0.001$ ) which makes sense to the increased mental issues among the police personnel as my study attempted to assess the psychological impact as well.<sup>13</sup>

In Nepal, a study was conducted during the early phase of the COVID-19 among the Health Care Workers by the use of DASS-21 as an assessment tool for the psychological wellbeing. Around 28.9%, 35.6% and 17.0% of the HCWs were found to have the symptoms of the stress, anxiety and depression respectively. HCWs working in high risk were 2 folds more in risk of having depression.<sup>14</sup> Remarkably, our study showed dramatic increase in the proportion of stress, anxiety and depression among the frontline police workers expressing the vulnerability and the deteriorating quality of mental health among the police personals.

## CONCLUSION

Police departments are organized as paramilitary bureaucracies, with well-defined command structures and responsibilities allocated to each employee. Frontline personnel, such as police officers, have become particularly vulnerable to depression, anxiety and stress due to their vulnerable exposures and nature of job. Given that police job is physically, emotionally, and cognitively demanding, it is critical to take proper measures to provide psychological support to officers. The factors associated with psychological domains like stress, anxiety and depression among police personals could be further studied to better understand the symptoms of problems.

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