

# Depression among Armed Police Force Serving in Battalion of Kaski

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## ABSTRACT

**Background:** Depression is growing mental health concern globally, and personnel in services like armed police force are particularly vulnerable due to exposure to high-stress environments, irregular work hours, exposure to traumatic events. The aim of the study was to assess the depression among armed police force serving in battalion of Kaski.

**Methods:** A descriptive cross sectional research design and probability simple random sampling technique was used for the study and calculated sample size was 159. Structured self-administered questionnaire was used to collect the data. Informed written consent was taken from each respondent prior to data collection. The collected data were analyzed using SPSS version 22. Descriptive statistics (i.e., frequency, percentage, mean and standard deviation) were used to describe the findings. Inferential statistics (i.e., chi square test) was used to measure the association of the level of depression with selected variables.

**Results:** out of 159 respondents, 15(9.4%) showed signs of mild mood disturbances, 3(1.9%) had borderline clinical depression, 1(0.6%) had moderate depression, and 1(0.6%) had severe depression. Depression levels were found significantly associated with alcohol drinking ( $p=0.025$ ).

**Conclusion:** The study concludes that few of the armed police force having prevalence of depression and there was statistical significant association between depression and alcohol drinking habits, highlighting the need for regular screening and mental health interventions along with awareness programs focused on prevention of alcohol consumption.

**Keywords:** Depression, Armed Police Force, Battalion

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**Submitted :** 03 September, 2025

**Accepted :** 06 October, 2025

**DOI :** <https://doi.org/10.3126/jnhsn.v4i1.90351>

## INTRODUCTION

Depression is a serious public health issue affecting over 280 million of people worldwide, impacting both personal well-

being and professional productivity with increasing prevalence among individuals in high- stress professions like the military and police personnel.<sup>1</sup> Studies indicate that police personnel are particularly vulnerable to mental health issues, with depression and anxiety being among the most common concerns, largely due to the demanding nature of their duties.<sup>2</sup>

Globally, studies have reported varying prevalence of depression in military and paramilitary settings and has increased over the past two decades, with rates reported to be as high as thirty percent in certain regions.<sup>3</sup> Factors such as isolation from family, lack

of support, and the repeated exposure to life-threatening situations exacerbate this vulnerability.<sup>4</sup> Within South Asia, paramilitary forces stationed in rural or conflict-prone areas are particularly susceptible, as they face additional challenges like inadequate mental health resources and cultural stigmas associated with mental health care.<sup>5</sup>

The global prevalence of depression in active military forces and veterans was 23% and 20% respectively. In addition, the prevalence of suicidal ideation and attempts in the military was 11%.<sup>3</sup> A systemic review on global prevalence and risk factor of mental illness in police personnel involving 272,463 police personnel from 24 countries was 14.6% for depression.<sup>6</sup>

Similarly, a study in Nepal among APF serving in police headquarter baraha shows prevalence of depression was 42.36%.<sup>7</sup> Another study among traffic police officers of Kathmandu shows the prevalence was 41.3%.<sup>5</sup> Depression among armed police and police force is a significant global concern with prevalence rates varying across regions. In Nepal, studies indicate higher rates. Therefore, the researcher is interested in conducting this study to assess depression among armed police force.

## METHODS

A descriptive cross-sectional study design was conducted at Armed Police Force Nepal No.24 Battalion Kalika Kaski, located in Pokhara -5, Malepatan. Probability simple random sampling technique was used. Each member of the population was assigned a unique number a random table was used. The calculated sample size was 159. The Nepali version Beck depression inventory I was used to collect data. This tool consisted of 21 multiple choice items each item score ranges from 0-3, the total score was 63 in which level of depression was categorized as 0-10 normal, 11-16 Mild mood disturbances, 17-20 Borderline clinical

depression ,21-30 Moderate depression ,31-40 Severe depression and Over 40 Extreme depression.

Ethical clearance was obtained from Institutional Review Committee Tribhuvan University, Institute of medicine (354(6-11) E2 081/082). Formal permission was taken from Armed Police Force Nepal no 24 Battalion Kalika, Kaski. Written informed consent was taken from each respondents before proceeding with data collection. Data collection was done with self-administered questionnaire. Data was collected from 2025 Jan 14<sup>th</sup> to Jan 28<sup>th</sup>.

The collected data was reviewed and organized for accuracy and completeness and was entered in SPSS version 22. Data were analyzed using descriptive statistics and inferential statistics(chi-square) was used to interpret association between the level of knowledge and selected demographic variables.

## RESULTS

The mean age and standard deviation of the armed police force were 32.4 years  $\pm$  6.2 with male participants the most 89.3%. Most of the armed police force were married 80.5%. Similarly 72.3% of the respondents were completed the secondary level of education (Table 1).

**Table 1:** Socio-Demographic Characteristics of Armed Police Force (n=159)

Characteristics	Number	Percent
Age (In completed years)		
20-24	18	11.3
25-29	34	21.4
30-34	48	30.2
>35	59	37.1
Mean $\pm$ SD 32.4 $\pm$ 6.2		

Characteristics	Number	Percent	Characteristics	Number	Percent
Gender			>12 years	78	49.1
Male	142	89.3	Mean years $\pm$ SD 12.61 $\pm$ 6.16		
Female	17	10.7			
Marital status			Alcohol drinking		
Married	128	80.5	Never	100	62.9
Unmarried	27	16.9	Former	38	23.9
Divorced	2	1.3	Current	21	13.2
Widow/widower	2	1.3			
Level of education			Smoking cigarette		
Basic(class 1-8)	26	16.4	Never	126	79.2
Secondary(class 9-12)	115	72.3	Former	17	10.7
Bachelor and above	18	11.3	Current	16	10.1

**Table 2:** Work Related and Behavioral Characteristics of Armed Police Force (n=159)

Characteristics	Number	Percent
Current rank		
Inspector	3	1.9
Senior sub inspector	1	.6
Sub inspector	5	3.1
Assistant sub inspector	7	4.4
Senior head constable	15	9.4
Head constable	18	11.4
Assistant head constable	40	25.2
Constable	70	44.0
Service duration in years		
<3 years	4	2.5
3-12 years	77	48.4

Most of the items had mean score below one indicating that the most of respondents scored zero which reflects minimal depressive symptoms. The highest mean score were observed for crying ( $0.44 \pm 0.94$ ) and tiredness/fatigue ( $0.37 \pm 0.60$ ) indicating that these symptoms were most commonly reported by respondents and lowest mean score observed for weight loss which was  $0.06 \pm 0.30$ . Similarly, 84.3% of respondents don't feel sad, 74.8% aren't discouraged at all. Less of the respondents 15.1% responded in failing more than they should have, 1.3% responded being dissatisfied with every aspect, 23.3 % were guilty over something, 3.8 % felt being punished and 1.9% were dissatisfied with themselves. Very few 2.5% had thought of killing themselves, 79.1 % were not feeling irritated all the time. Almost 90.6% had intact interest, 86.6 % can make their decision. Among the respondents 9.4% were worried of their old appearance, 17.6% responded in not working as previously and 19.5 % couldn't sleep as usual. More than one third 85.5% had good appetite, 92.5% weren't worried of somatic preoccupation and 84.9% haven't notice any change in sex drive (Table 3).

**Table 3:** Depression among Armed Police Force (n=159)

Response	0 Not at all	1 Some of the time	2 Often	3 Most or all of the time	Mean ± SD
Sadness	134 (84.3)	24 (15.1)	0 (0)	1 (0.6)	0.16 + 0.42
Pessimism	119 (74.8)	36 (22.8)	3 (1.9)	1 (0.6)	0.28 + 0.52
Past failure	130 (81.8)	24 (15.1)	2 (1.3)	3 (1.9)	0.23 + 0.56
Loss of satisfaction	140 (88.1)	15 (9.4)	2 (1.3)	2 (1.3)	0.15 + 0.48
Guilty feelings	122 (76.7)	37 (23.3)	0 (0)	0 (0)	0.23 + 0.42
Punishment feelings	144 (90.6)	6 (3.8)	5 (3.1)	0 (0)	0.17 + 0.60
Self-dislike	149 (93.7)	6 (3.8)	3 (1.9)	1 (0.6)	0.09 + 0.42
Self-criticalness	133 (83.6)	20 (12.6)	3 (1.9)	3 (1.9)	0.22 + 0.56
Suicidal thought	150 (94.3)	5 (3.1)	4 (2.5)	0 (0)	0.08 + 0.35
Crying	123 (77.4)	17 (10.7)	3 (1.9)	16 (10.1)	0.44 + 0.94
Irritability	127 (79.9)	24 (15.1)	8 (5.0)	0 (0)	0.25 + 0.53
Loss of interest	144 (90.6)	14 (8.8)	0 (0)	1 (0.6)	0.10 + 0.36
Indecisiveness	138 (86.8)	18 (11.3)	3 (1.9)	0 (0)	0.15 + 0.40
Body image	142 (89.3)	15 (9.4)	0 (0)	2 (1.3)	0.13 + 0.43
Work inhibition	131 (82.4)	28 (17.6)	0 (0)	0 (0)	0.17 + 0.38
Change in sleeping pattern	119 (74.8)	31 (19.5)	7 (4.4)	2 (1.3)	0.32 + 0.61
Tiredness/ Fatigue	107 (67.3)	46 (28.9)	4 (2.5)	2 (1.3)	0.37 + 0.60
Change in appetite	136 (85.5)	21 (13.2)	2 (1.3)	0 (0)	0.15 + 0.39
Weight loss	150 (94.3)	7 (4.4)	2 (1.3)	0 (0)	0.06 + 0.30
Somatic preoccupation	147 (92.5)	7 (4.4)	3 (1.9)	2 (1.3)	0.11 + 0.46
Loss of interest in sex	135 (84.9)	21 (13.2)	1 (0.6)	2 (1.3)	0.18 + 0.48

Among the armed police force 12.6% were found to have some level of depression, among those 9.4% had mild mood disturbances, 1.9 had borderline clinical depression, 0.6% had moderate depression, 0.6% had severe depression and none of the respondents scored in the category of extreme depression (Table 4).

**Table 4:** Level of Depression of Armed Police Force (n=159)

Level of Depression	Number	Percent
No depression (1-10)	139	87.4
Mild mood disturbance (11-16)	15	9.4
Borderline clinical depression (17-20)	3	1.9
Moderate depression (21-30)	1	0.6
Severe depression (31-40)	1	0.6

There was significant association between level of depression with alcohol drinking. There were no statistically significant association between level of depression with age, gender, marital status, level of education, service years, rank, cigarette smoking (Table 5).

**Table 5:** Association between Level of Depression and Selected Variables (n=159)

Variables	Depression		$\chi^2$	p -value
	No Depression No.(%)	Mild mood disturbance to severe depression No.(%)		
<b>Age in years</b>				
<30	47 (90.3)	5 (9.6)	0.617	0.432
>30	92 (85.9)	15 (14.0)		
<b>Gender</b>				
Male	124 (87.3)	18 (12.6)	0.011	0.915
Female	15 (88.2)	2 (11.7)		
<b>Level of education</b>				
Basic	22 (84.6)	4 (15.3)	0.239	0.888
Secondary	101 (87.8)	14 (12.1)		
Bachelor and above	16 (88.8)	2 (11.1)		
<b>Service years</b>				
<15	83 (87.3)	12(12.6)	0.001	0.980
>15	56(87.5)	8 (12.5)		
<b>Rank</b>				
Commissioned officer	15(93.7)	1(6.5))	0.762 a	0.383
Noncommissioned officer	124(86.7))	19(13.2)		
<b>Alcohol drinking</b>				
Never	93 (93.0)	7 (7.0)	7.404 a	0.025*
Former	30 (78.9)	8 (21.0)		
Current	16 (76.1)	5 (23.8)		
<b>Smoking cigarette</b>				
Never	111 (88.0)	15 (11.9)	0.449	0.799
Former	14 (82.3)	3 (17.64)		
Current	14 (87.5)	2 (12.5)		

$\chi^2$ :Chi Square, <sup>a</sup>:likelihood ratio, \*significant at  $p<0.05$

## DISCUSSION

The cross-sectional descriptive design based on quantitative approach was used to assess the prevalence of depression among armed police force personnel serving in battalion of Kaski. A total of 159 armed police force participated in the study. In the present study, the socio demographic profile revealed that 89.3 % of the respondents were male ,80.5% were married and 44% were serving in the constable rank which is similar to the findings of a study conducted among traffic police in Kathmandu Nepal.<sup>5</sup>

The study revealed that 12.6% of the respondents were found to have some level of depression, while 87.4% showed no depressive symptoms. The findings of the study are consistent with the study conducted among police personnel in Shri Lanka which reported a 10.6% prevalence of depression among police personnel.<sup>8</sup> Similarly, the results align closely with the findings of USA which found a 12.0% prevalence of depression among currently deployed U.S. military personnel.<sup>2</sup> However, the results of the current study contrast sharply with several other investigations showing significantly higher prevalence rates, A study done in Nepal among armed police force serving in Baraha headquarter showed 42.36% prevalence of depression.<sup>7</sup> Likewise, the findings sharply contrast with the study conducted among traffic police officers in Kathmandu showed 41.3% of traffic police officers had depressive symptoms.<sup>5</sup> The findings of this study showed that 9.4% respondents had mild mood disturbances, 1.9% respondents had borderline clinical depression, 0.6% had moderate depression, 0.6% had severe depression. The findings of the study are consistent with a study conducted in Shri Lanka among police personnel, which showed that 12.6% had mild, 3.4% had moderate and 1.1 % had severe depression.

<sup>8</sup> This finding are in contrast to the study conducted in Nepal APF Baraha headquarter

where 14.97%, 10.51%, 12.74%, 3.18% ,0.96% of armed police force were suffering from mild mood disturbances, borderline clinical depression, moderate, severe and extreme depression respectively.<sup>7</sup>

The findings of present study showed that mean depression score was less than one in all items of beck depression inventory and the highest mean score was observed for crying (0.44) and tiredness/ fatigue (0.37). The findings of the study align with the study findings among police personnel in Kandy police division, Sri Lanka.<sup>8</sup> However this finding stand in sharp contrast to a study among traffic police in Kathmandu, Nepal where the mean depression was reported to be 10.2.<sup>5</sup>

Present study showed that statistical significant association between depression with alcohol drinking ( $p=0.015$ ) which is consistent with a study among personnel in military training in the north of Pakistan which showed that there was statistical significant association between depression with alcohol drinking ( $p=<0.001$ ).<sup>9</sup> Similarly, the findings of the study is also consistent with the findings of the study among UK police employees which showed strong association between depression and alcohol use( $p=<0.001$ ).<sup>10</sup>

The findings of the study showed statistical no significant association between depression and smoking, age this study result is inconsistence with the findings of study conducted among UK police employees which reported statistically association between respondent level of depression with both smoking and age ( $p=<0.001$ ).<sup>10</sup> The findings of the study showed no significant association between depression with gender, this study findings is consistence with the findings of study among traffic police in Kathmandu, Nepal which showed statistically no association between respondent level of depression with gender.<sup>5</sup>

The findings of the study showed no significant association between depression

with marital status and education level, this study is consistence with the findings of study conducted among military personnel in taif region, Saudi Arabia that showed statistically no association between respondent level of depression with marital status and ( $p=0.91$ ).<sup>11</sup> However, this study is inconsitence with the findings of study conducted among UK police employees that showed statistically association between respondent level of depression with marital status and education level ( $p=<0.001$ ).<sup>10</sup>

The findings of the study showed no significant association between depression with either rank or service years, these findings align with the study conducted among the personnel in the UK police service showed no significant association between depression with rank of the armed police force ( $p=0.186$ ).<sup>12</sup> However they are inconsistent with another study that investigated the prevalence of harmful and hazardous drinking among UK police personnel and their co-occurrence with job strain and mental health problems that found significant association between depression with rank and service years ( $p=<0.001$ ).<sup>10</sup>

## CONCLUSION

This study concluded that few of the armed police force have some form of depression. There was a statistical significant association between depression and alcohol drinking habits. Thus early identification of depression among armed police force through the means of routine mental health screening programs as a part of routine checkup can be done.

## ACKOWLEDGEMENT

A sincere gratitude to Kalika Battalion for granting permission to collect data and all the respondents who participated in this study.

**FINANCIAL SUPPORT :** This study was supported by Pokhara Nursing Campus.

**CONFLICT OF INTEREST:** None

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