Sociodemographic Predictors of Psychological Distress among Police Personnel: An Empirical Investigation

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Abstract

Background: Police work is one of the most responsible and demanding professions. It is obvious that police officers frequently experience daily stress, anxiety, and in some circumstances, depression.However, there are few researches investigating the responsible socio-demographic factors that might contribute to psychological distress among police personnel. **Aim:** Present study aims to study the level of anxiety, stress, and depression among police personnel. It also aims to explore the sociodemographic factors that significantly predict the mental health of the study participants.**Method:** Total 480 police personnel were recruited for the study using purposive sampling method. A socio-demographic data sheet and Depression, Anxiety, Stress Scale were administered on the participants to collect data regarding their sociodemographic details. **Result:** It was found that a significant portion of the participants experienced mild to extremely severe level of stress (31.70%), anxiety (34.20%), and depression (27.10%). Female police personnel were more likely to experience (t= -8.94, p<0.01) depression, anxiety (t=8.89, p<0.01), and stress (t=6.66, p<0.01) than their male counterparts. Lastly, gender, age, and monthly income emerged as the significant predictors of the general mental health of police personnel. **Conclusion:**Police personnel are facing a substantial amount of stress, anxiety, and depression. Young, female, and, low monthly income earning police personnel are at greater risk for developing mental health than their counterparts. Female police personnel experience more psychological distress than male police personnel.

INTRODUCTION

Psychological distress refers to a state of emotional suffering which is characterized by symptoms of stress, anxiety, and depression (Drapeau et al., 2012). These symptoms can range from a person showing a lack of interest, restlessness, feeling tense, sadness, hopelessness, and nervousness, which may be accompanied by some somatic symptoms such as headache, fatigue, and insomnia (Hughes, 1990; Lewis-Fernández & Kirmayer, 2019).

High levels of psychological distress can be a sign of common mental diseases like depression and anxiety disorders and are a sign of poor mental health (Cuijpers et al., 2009).

Police services have always been one of the most challenging and stressful services in India and with changing times. In some previous studies, the prevalence of stress, anxiety, and depression symptoms among police personnel ranged from 6% to 45.%, 9% to 24%, and 11% to 17%, respectively (Mahadevaswamy et al., 2022; Singh et al., 2022; Naik & Kacker, 2019). It is obvious that police officers frequently experienced daily stress, anxiety, and in some circumstances, depression.Life-threatening work conditions, insufficient resources, changing shifts, extreme working conditions along with heavy workload raise anxiety, psychological distress, and work stress in the police personnel (Ilić et al., 2017).Few studies on the occupational health problems among constables revealed that inadequate salaries/facilities, round-the-clock duty, no time for family, negative interaction with other police staff, harassment, role ambiguity, and negative public image are some of the factors leading to psychological stress and burn out(Kavya& Chandrashekar, 2016; Suresh et al., 2013; Srinivasan& Ilango, 2013).Zukauskas *et al.* (2009) identified in their study on police officers that consequences of stress included depression, alcoholism, physical illness, and suicide. Kohan & O'connor (2002) correlated job stress with high substance use among police.Therefore, performing undesignated duties and responsibilities for a longer duration of time can produce additional work stress and burnout among police professionals.Altogether, these factors make police personnel vulnerable for various psychological and physical health issues.

Indian studies have also clarified that the psychological distress are very high amongpolice personnel. Socio-demographic factors can play important role in psychological stress as it impact the way an individual perceives and cope with the life hassles. However, there is dearth of Indian studies exploring socio-demographic predictors that contribute to the psychological distress in police personnel.Therefore, the present study aims to contribute to the existing literature with twofold objectives; First, to explore the depression, anxiety and stressin police personnel and second to

examine that which demographic factors such as age, gender, etc. significantly predict the mental health of police personnel. Additionally, the objective of the study was to assess the gender difference on the level of anxiety, depression, and stress among study participants.

MATERIAL AND METHODS

Participants and Procedure

The present study was conducted in the different police stations of 10 districts of Chhattisgarh state. The present study was conducted in confirmation of the rules of Helsinki declaration. Initially, written permission was taken from the higher authorities of the concerned police station for the collection of data from their personnel. Further, based on the purposive sampling technique, 480 police personnel were selected for the study based on the below-mentioned inclusion and exclusion criteria. Co-operative police personnel who are able to read and comprehend English properly were included in the sample. Participants with the history of major physical illness or psychiatric illness, physical amputation due to injury, and other neurological diseases such as epilepsy, etc. were excluded from the study. The sociodemographic and clinical data sheet was filled after taking informed consent of the participants. Depression, Anxiety and Stress Scale (DASS) was administered to all the included participants following the standard test administration procedure. After test administration, all protocols were scored and analyzed as per the standard scoring procedure.

MEASURES

Socio Demographic Data Sheet: The socio demographic data sheet was semi-structured and developed for the present study and consisted of variables like age, sex religion, education marital status, occupation, caste, domicile, family income, duration of illness etc.

Depression, Anxiety and Stress Scale: The DASS is a 42-item questionnaire which includes three self-report scales designed to measure the negative emotional states of depression, anxiety and stress. Respondents are asked to use 4-point severity/frequency scales to rate the extent to which they have experienced each state over the

past week. It shows that high score is the indicators of the high level of depression, anxiety and stress. The test-retest reliability coefficient of this test is 0.48 and the Cronbach's Alpha internal consistency coefficients range from .89 to .96. The findings of explanatory factor analysis indicate that the factor loading ranges from .36 to .80 for items of depression, .31 to. 64 for items of anxiety, and the factor load .40 to .76 for items of stress. Inter-subtest correlations are .38 for depression-anxiety, .46 for anxiety-stress, and .54 for depression-stress. The scores of The Beck Depression Inventory and The Beck Anxiety Inventory are highly correlated with the obtained scores of DASS i.e. 0.74 and 0.81 respectively (Lovibond& Lovibond, 1995).

Statistical Analysis

After the data collection, obtained responses were statistically analysed using IBM Statistical Package for Social Sciences (SPSS) -19. First of all, descriptive statistics such as frequency, percentage, mean, and standard deviation (SD) were computed to assess the prevalence of stress, depression, and anxiety among the study group. Regression analysis was carried out to assess the extent to which sociodemographic variables (i.e. sex, age, income, family type etc.) predicts stress, anxiety, and depression among police personnel. Lastly, Independent sample t-test was also carried out to measure gender differences in the level of stress, depression, and anxiety among the study sample.

RESULTS

Table 1 reveals the out of 480 participants, 296 were male and 184 were female. The mean (± S.D.) age of the participants was 34.93 (±9.62)years. Majority of the participants (39.46%) belonged to the monthly income range of 15000 to 25000. Most of the participants were married (56.20%) and belonged to nuclear family system (75.80%). Significant proportion of the participants had (79.2%) peaceful family environment and a major portion of them (74.8%) reported troublesome work environment. Detailed sample characteristics are provided in table.

Family Environment	Peaceful environment	380 (79.2%)
	Troublesome environment	100 (20.8%)
Work Environment	Peaceful environment	121 (25.2%)
	Troublesome environment	359 (74.8%)

SD=Standard deviation, N= Total number of respondents; %= percentage

Table 2 reveals the presence of stress, anxiety, and depression among police personnel. Result indicates that approximately sixty eight percent, sixty five percent, and seventy three percent of the participants experienced normal level of stress, anxiety, and depression respectively. Mild level of stress anxiety, and depression were reported by twelve percent, six percent, and ten percent of the participants respectively. Also, about eight percent, seven percent, and two percent of participants reported extremely severe level of stress, anxiety, and depression respectively. Altogether, approximately thirty two percent, thirty four percent, and twenty seven percent participants reported mild to extremely severe level of stress,

Table 1 : Socio-Demographic Characteristics among Police Personnel

Variables		(Mean ± SD) / N (%)
Age		34.93±9.62
Gender	Male	296 (61.7%)
	Female	184 (38.3%)
Monthly Income	15000 to 25000	190 (39.6%)
	25000 to 35000	146 (30.4%)
	35000 to Above	144 (30.0%)
Marital Status	Unmarried	114 (23.8%)
	Married	270 (56.2%)
	Remarriage	44 (9.2%)
	Separated	52 (10.8%)
Family Types	Joint	116 (24.2%)
	Nuclear	364 (75.8%)

anxiety, and depression respectively. It means a significantly higher percentage of police personnel experience psychological distress and mental health difficulties.

Table 2: Depression, Anxiety and Stress among Police Personnel

Variables	Stress N (%)	Anxiety N (%)	Depression N (%)
Normal	328 (68.3%)	313 (65.2%)	350 (72.9%)
Mild	58 (12.1%)	30 (6.2%)	50 (10.4%)
Moderate	32 (6.7%)	62 (12.9%)	46 (9.6%)
Severe	26 (5.4%)	42 (8.2%)	24 (5.0%)
Extremely Severe	36 (7.5%)	33 (6.9%)	10 (2.1%)

N= Total number of respondents; %= percentage

Table 3 presents the group comparison by gender for stress, anxiety, and depression among police personnel. Results of independent sample t-test indicate that female police personnel scored significantly higher than men on stress ($t_{(479)}$ = -6.66, $p<0.01$), depression ($t_{(479)}$ = -8.94, $p<0.01$), and anxiety ($t_{(479)}$ = -8.89, $p<0.01$). This result says that compared to males, female police personnel experience greater anxiety, stress and depression. As compared to the male mean scores of stress (9.45±11.47), anxiety (4.74±6.65), and depression (4.38±6.81), female reported significantly higher mean scores for stress (15.38±7.98*)*, anxiety (10.01±5.71*)*, and depression (10.28±7.14).

Table 3: Comparison of Stress, Depression, and Anxiety among male and female with Police Personnel

Variable	Gender	N	Mean	t
Stress	Male	296	9.45±11.47	-6.66**
	Female	184	15.38±7.98	
Anxiety	Male	296	4.74±6.65	-8.89**
	Female	184	10.01±5.71	
Depression	Male	296	4.38±6.81	-8.94**
	Female	184	10.28±7.14	

N= Total number of respondents; **p <0.01

Table 4 presents the stepwise regression analysis for all the participants, when depression was treated as the dependent variable. In the first model, gender was entered (B=5.89, β=0.38, R^2=0.14). Further, in the second model, monthly income(B=-1.62, β= -0.18, R^2=0.02) was added to the regression, in addition to gender. Among these two predictors, gender explained the largest portion (14.60%) of variance, followed by monthly income, explaining 2.10 per cent of variance in predicting depression. The total proportion of variance explained by these two variables was approximately sixteen percent. A negative beta value for monthly income indicates that monthly income and depression are inversely related. On the other hand greater numeric value of gender is related to more depressive symptoms. In this study, female participants are assigned a numeric value of two while male participants were denoted by a numeric value of one. Hence, the finding suggests that female participants are more prone to depression.

Table 4: Summary of Stepwise Regression Analysis of Sociodemographic Factors (i.e. age, sex, monthly income, family type) as Predictors and Depression as Criterion

Model	Variables	B	Std. error	R	Adjusted R^2	R^2 change	β	F. change	df
1	Constant	-1.50	0.95	0.38	1.44	0.14		81.78	479
	Gender	5.89	0.65				0.38		
2	Constant	3.86	1.81	0.40	0.16	0.02		12.07	479
	Gender	4.25	7.99				0.27		
	Monthly Income	-1.62	0.46				-0.18		

Table 5 presents the regression analysis for all the participants, when anxiety was treated as the dependent variable. In the first model, gender was entered (B=5.27, β=0.37, R^2=0.14) and all the others variables were excluded. Only gender emerged as the significant predictor of anxiety among police personnel. Gender explained the largest portion (14.00%) of variance in the level of anxiety. As explained earlier, female participants were more vulnerable to anxiety.

Table 5: **Summary of stepwise regression analysis of sociodemographic factors (i.e. age, sex, monthly income, family type) as predictors and anxiety as criterion**

Model	Variables	B	Std. error	R	Adjusted R^2	R^2 change	β	F. change	df
1	Constant	0.52	0.86	0.37	0.14	0.14		79.05	479
	Gender	5.27	0.59				0.37		

Table 6 presents the regression analysis for all the participants, when depression was treated as the dependent variable. In the first model, age (B=-0.41, β=-0.31, R^2=0.13) was entered. Further, in the second model, gender was added (B=2.89, β=0.13, R^2=0.01) to the regression, in addition to age. Among these two predictors, age explained the largest portion (13.80%) of variance, followed by gender, explaining one per cent of variance in predicting stress. The total proportion of variance explained by these two variables was approximately fourteen percent. A negative beta value for age shows that age and depression are inversely related. On the other hand, female participants are more likely to experience stress than their male counterparts.

Table 6: Summary of stepwise regression analysis of sociodemographic factors (i.e. age, sex, monthly income, family type) as predictors and stress as criterion

Model	Variables	B	Std. error	R	Adjusted R^2	R^2 change	β	F. change	Df
1	Constant	26.09	1.70	0.37	0.13	0.13	-0.31	76.41	479
	Age	-0.41	0.04						
2	Constant	19.82	2.79	0.39	0.14	0.01	-0.31	7.91	479
	Age	-0.34	0.52						
	Gender	2.89	1.03				0.13		

DISCUSSION

The present study was found that a significant proportion of police personnel experienced stress, depression and anxiety. More than 30% police personnel experienced mild to extremely severe stress and anxiety, while 27% of them experienced mild to extremely severe level of depression. Some previous studies found similar findings.Approximately 14-25%, 11-30% and18-25% police personnel reported significant symptoms of anxiety and depression respectively

(Mahadevaswamyet al., 2022;Kavya& Chandrashekar, 2016; Ragesh et al., 2017). The high rate of poor mental health consequences among police personnel could be the result of several factors like, longer working hours, burnout, fatigue, unfavourable working conditions, lack of sleep and rest, political pressure (Zukauskas et al., 2009), lack of family time, fear of death, negative image of police in public etc (Kohan & O'connor, 2022). These factors affect the physical, psychological and interpersonal aspects of a police personal's life negatively and can lead to higher level of psychological distress.

Further, female participants had comparatively higher scores for stress, anxiety, and depression compared to the male participants. Probable reason for this higher stress could be that generally in India females manage both the household duties (i.e. baby-sitting, cleaning, cooking etc.) as well as their professional work (Srinivasan&Ilango, 2013; Lambert et al., 2021) Apart from this, female police personnel might experience gender discrimination, gender stereotypes, negative comments from public, sexual harassment, lack of basic amenities like proper toilets or changing rooms at work-place etc. which can lead to stress and anxiety (Angehrn et al., 2021). Handling individual, professional and family life simultaneously mightmake them more anxious than males. Apart from this unequal distribution of work and responsibilities, there are some neurodevelopmental and hormonal factors that play role in more depressive and anxious symptoms among females (Wolter et al., 2019).

Further, Gender emerged as a significant predictor of mental health among police personnel. It was found that among several sociodemographic factors like age, gender, monthly income, family type etc., gender emerged as the best predictor of depression followed by monthly income. Further, the result states a positive association between gender and depression. A significant association was seen between gender and depression. It means increase in the value assigned to the gender (i.e. man=1, women=2), there is an increase in the depressive symptoms. Similarly, gender emerged as the second best predictor for stress. As, explained earlier, female police personnel tend to feel more anxious, depressed, and stressed because of thegender discrimination, stereotypes, stigma as

(Angehrn et al., 2021) well as multiple responsibilities they are given, apart from their profession (Kavya& Chandrashekar, 2016).

Monthly income emerged as the second-best predictor of depression among police personnel. Increase in monthly income leads to decrease in depressive symptoms. The symptoms of depression lessen with the increase in monthly income. Earlier researches have also found a significant association between monthly income and mental health (Sareen et al., 2011). One probable reason for it could be that increased monthly income provides a sense of security for family and future in a profession which is full of danger and uncertainty (Nalla & Gurinskaya et al., 2022). Hence police personnel with few resources and less income could feel more worried and depressed.

Similarly, age occurred as the best predictor of stress followed by gender, among police personnel. Increase in age leads to relatively lowered level of stress. Younger age may entail both a lack of occupational experience and resources to handle with numerous aspects of occupational stress (Soares et al., 2007).Also, the young age police personnel are not very experienced and the demanding job profile could put additional pressure on them and they might feel difficulty coping with these situations (Ragesh et al., 2016).

LIMITATIONS

Firstly, the data was collected through self-report measure, which can lead to underreporting or over reporting of the actual issues faced by the participants. Also, though the sample size is relatively higher, the data are collected from only on state of India i.e. Chhattisgarh, which limits its generalizability. Future studies must focus on the different regions of India to get better picture of this situation. However, this is among one of those few studies in India which attempted to look into the psychological distress of police personnel with the aim to find out best predicting socio-demographic factors.

CLINICAL IMPLICATIONS

Overall, it can be said that police personnel face a lot of psychological distress. Researchers, clinicians, and policy makers should work in the direction to identify the factors that could improve the mental health of police personnel and provide

them with a more resourceful and comparatively healthy work conditions. Further, the findings of the present study must be providing an insight into the mental health conditions of police personnel which can be beneficial for policy makers.

CONCLUSION

Policing is one of the most risky jobs, which can bring the mental health of police personnel tovery vulnerable state, especially female police personnel. Long working hours, lack of food and water during duty, life threat, staying away from family etc. can negatively affect the mental health of police personnel in India.Psychological distress among police personnel can be harmful for them as well as the whole society. With changing times, there is a chance of more demanding and challenging responsibilities of police personnel which in turn leading to greater mental health difficulties. Hence, there is a need to develop an adequate provision and work schedule for police personnel to protect their mental health. It can be done by providing consultation from mental health professional and organizing stress management programs.

REFERENCES

Angehrn, A., Fletcher, A. J., & Carleton, R. N. (2021). "Suck it up, buttercup": understanding and overcoming gender disparities in policing. *International journal of environmental research and public health*, *18*(14), 7627.

Cuijpers, P., Smits, N., Donker, T., Ten Have, M., & de Graaf, R. (2009). Screening for mood and anxiety disorders with the five-item, the three-item, and the two-item Mental Health Inventory. *Psychiatry research*, *168*(3), 250-255.

Drapeau, A., Marchand, A., & Beaulieu-Prévost, D. (2012). Epidemiology of psychological distress. *Mental illnesses-understanding, prediction and control*, *69*(2), 105-106.

Hughes, C. C. (1990). Rethinking psychiatry: from cultural category to personal experience. *The Journal of Nervous and Mental Disease*, *178*(3), 210-211.

Ilić, I. M., Arandjelović, M. Ž., Jovanović, J. M., &Nešić, M. M. (2017). Relationships of work-related psychosocial risks, stress, individual factors and burnout–Questionnaire survey among emergency physicians and nurses. *Medycyna Pracy. Workers' Health and Safety*, *68*(2), 167-178.

Kavya, C. N., & Chandrashekar, E. (2016). A sociological study on occupational stress and health problems among female police constables in Karnataka. *International Journal of Applied Research* ,*2*(5),487-491.

Kohan, A., & O'connor, B. P. (2002). Police officer job satisfaction in relation to mood, well-being, and alcohol consumption. *The Journal of psychology*, *136*(3), 307-318.

Lambert, E. G., Qureshi, H., & Frank, J. (2021). The good life: Exploring the effects job stress, job involvement, job satisfaction, and organizational commitment on the life satisfaction of police officers. *International Journal of Police Science & Management*, *23*(3), 279-292.

Lewis-Fernández, R., &Kirmayer, L. J. (2019). Cultural concepts of distress and psychiatric disorders: Understanding symptom experience and expression in context. *Transcultural Psychiatry*, *56*(4), 786-803.

Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour research and therapy*, *33*(3), 335-343.

Mahadevaswamy P, Ranganath, P.R. & Yunis (2022). Assessment of Depression, Anxiety, Stress and Influence of Selected Demographic Variables among Police Constables. *International Journal of Indian Psychology*, *10(2),* 1630-1638.

Naik, V., &Kacker, P. (2019). Stress, Personality and Coping in Police Personnel. *The Indian Police Journal*, *66*(3), 68-72.

Nalla, M. K., &Gurinskaya, A. (2022). Police legitimacy or risk-avoidance: what makes people feel safe?. *Journal of Crime and Justice*, *45*(1), 1-20.

Ragesh, G., Tharayil, H. M., Raj, M. T., Philip, M., & Hamza, A. (2017). Occupational stress among police personnel in India. *Open Journal of Psychiatry & Allied Sciences*, *8*(2), 148-152.

Sareen, J., Afifi, T. O., McMillan, K. A., & Asmundson, G. J. (2011). Relationship between household income and mental disorders: findings from a population-based longitudinal study. *Archives of general psychiatry*, *68*(4), 419-427.

Singh, D. P., Rastogi, K., & Kumar, S. (2022). Grit, depression, anxiety and stress in serving and retired police personnel. *Journal of Psychosocial Research*, *17*(1), 257-267.

Soares, J. J. F., Grossi, G., & Sundin, Ö. (2007). Burnout among women: associations with demographic/socio-economic, work, life-style and health factors. *Archives of women's mental health*, *10*(2), 61-71.

Srinivasan, S., &Ilango, P. (2013). Stress problems faced by police constables in North Chennai. *Global Research Analysis*, *2*(4), 233-235.

Suresh, R. S., Anantharaman, R. N., Angusamy, A., & Ganesan, J. (2013). Sources of job stress in police work in a developing country. *International Journal of Business and Management*, *8*(13), 102-110.

Wolter, C., Santa Maria, A., Wörfel, F., Gusy, B., Lesener, T., Kleiber, D., & Renneberg, B. (2019). Job demands, job resources, and well-being in police officers—a resource-oriented approach. *Journal of police and criminal psychology*, *34*(1), 45-54.

Zukauskas, G., Ruksenas, O., Burba, B., Grigaliuniene, V., & Mitchell, J. T. (2009). A study of stress affecting police officers in Lithuania. *International journal of emergency mental health*, *11*(4), 205-214.