

A Psychological Study of Stress, Personality and Coping in Police Personnel

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ABSTRACT


Context: There have been few studies focusing on occupational/organizational causes of stress in police. Hardly any studies exist on personality traits and coping methods in this group of individuals. **Aims:** To study the association of personality traits and coping methods to psychological stress in police personnel. **Settings and Design:** This cross-sectional study was conducted among the constables and head constables working in the Police Department, Vizianagram town, Andhra Pradesh. **Materials and Methods:** The study sample consisted of 150 police persons. The socio-demographic data was individually collected from them. General Health Questionnaire-28 (GHQ-28) was used for assessing psychological stress, Eysenck's Personality Questionnaire (EPQ) for personality traits, and Coping Checklist-1 (CCL-1) for eliciting coping methods. The statistical analysis was done using SPSS v 10 software. **Results:** On screening by GHQ-28, 35.33% of the police were found to be having psychological distress. The socio-demographic variables showed no significant association to psychological stress. Personality traits such as neuroticism, psychoticism, and extroversion and coping methods like negative distraction and denial/blame showed statistically significant association ($P < 0.05$) with psychological stress. The most commonly used coping methods across the sample were social support (72.55%), acceptance/redefinition (64.72%), and problem solving (60.46%). As measured by Pearson's correlation coefficient (r), there was evidence of linear association between certain personality traits and coping methods as well. **Conclusions:** The personality traits and coping methods have significant independent and interactive role in the development of high psychological stress in police persons, thus placing them at a high risk of developing psychiatric disorders.

Key words: Coping methods, personality traits, police personnel, psychological distress

INTRODUCTION

Police services have always been one of the most challenging and stressful services in India and with changing times it is becoming even more so. The major

brunt of this job is borne by constables as they are the foot-soldiers of police in India. They have to deal with angry mobs, counter-insurgency operations, traffic control, VIP security, political rallies, religious festival crowd control, and various other law and order duties without losing their composure and sensitivity. They have to face potentially hazardous situations that can result in physical or mental trauma or even death in the line of duty. Their work stress can be further aggravated because of their personality traits or wrong coping methods. A majority of Indian^[1,2] and international^[3,4] studies have found high stress levels in police, which is disturbing as psychiatric morbidity in police can have many direct and indirect negative consequences

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for society. Therefore, apart from physical fitness, they have to be mentally fit to do full justice to their duties.

Review of literature

Previous studies have commented on the high stress levels in police and its association with physical and mental ill-effects. High psychological stress is seen to have a negative impact not only on their work ability but also in the personal and interpersonal spheres of their lives.

Deb *et al.*, in a study on traffic constables under Kolkata Police, disclosed that 79.4% of them were moderately or highly stressed.^[1]

A study by Rao *et al.* on Central Industrial Security Force (CISF) personnel found 28.8% of them scoring positive for high stress on GHQ-30. The study also found higher psychiatric morbidity in the high-stress group.^[2]

Collins *et al.* in a cross-sectional study on county police constables and sergeants in the United Kingdom found that the high-stress group constituted 41% of the population and showed significant association with having negative job perception.^[3] Lipp^[4] found 43% of senior Brazilian police officers under significant stress.

Zukauskas *et al.* identified in their study on police officers that consequences of stress included depression, alcoholism, physical illness, and suicide.^[5] Kohan *et al.* correlated job stress with high substance use among police.^[6]

Thus, we need to examine ways to reduce psychological stress to ensure that the police feel physically and mentally competent to do its duty efficiently and alertly.

There is a lot of research material on external and occupational sources of stress in police work, emphasizing on the organizational and operational problems. These stressors include lack of organizational support, excess workload, inadequate leave, political pressures, lack of time for family, frequent transfers, negative public image, and exposure to duty related traumatic events.^[1,3,7,8]

However, although most of the police persons are exposed to the same external occupational and organizational stressors, all of them do not develop psychological morbidity. This is because a person's vulnerability to stress is also based on an individual's appraisal and response to difficult situations. Personality and coping both play an interactive and independent role in influencing adjustment to stress.^[9]

Cabarkapa, in a study on military aviation crew, found neuroticism as a personality trait in correlation to job-related stress and concluded that stress evaluation and certain personality characteristics examination can be used for the development of basic anti-stress programs and measures.^[10]

Gershon *et al.* reported that the most important risk factor in a police officer's perceived work stress was maladaptive coping behavior and exposure to critical incidents.^[11]

A study involving different ranks of police personnel by Ranta^[12] reported that enhancing the coping behavior of subjects using Indian psychological techniques resulted in a significant reduction in job stress.

Personality traits and coping methods have also been linked to the development of suicide ideation in police personnel,^[13] thus highlighting the need for further research and work on these two aspects.

As there have not been many studies in this regard in India, this study is an attempt to explore the relationship between personality traits, coping methods, and psychological stress in police personnel. This can also prove to be a useful guide towards pre-recruitment and post-recruitment measures to reduce stress in police services.

Aims

1. To study the association of personality traits and coping methods with the development of psychological stress in police personnel
2. To study the associations between personality traits and coping methods used by the study sample.

MATERIALS AND METHODS

The study was approved by the Ethics Committee of Maharaja Institute of Medical Sciences, Vizianagram.

Sample selection

The sample was obtained from among the police personnel working in the law and order branch of police department, Vizianagram town, Andhra Pradesh. All the police personnel of the rank of constable and head constables who were on active duty were included in the study. We chose to include only constables and head constables in the sample as they more or less face the same external stressors on family, financial, and work front. Therefore, the study could focus on the role of individual personality traits and coping methods in the development of psychological stress in them.

The officers above them in rank, apart from having a different work and external stressors profile, were also

too few in number in the concerned town under study to have any representative value in the sample.

Tools used in assessment

After taking written and informed consent from the subjects under study, they were assessed on the following tools:

- a. Socio-demographic variables: A semi-structured questionnaire on socio-demographic data was used to elicit age, sex, marital status, duration of service, and rank
- b. General Health Questionnaire-28, Goldberg (G.H.Q-28): It is one of the most widely used and validated questionnaires to screen for high psychological stress and morbidity.^[14] Using Goldberg's terminology and based on their GHQ scores, the personnel were divided into two groups as "case" (score > 4) and "noncase" (score ≤ 4)
- c. Eysenck's Personality Questionnaire (EPQ): It was used to assess personality traits of the police personnel. It is designed to give rough and ready measure of three important personality dimensions: Psychoticism, neuroticism, and extroversion. These three dimensions are conceived of as being quite independent and, thus, can exist in all possible combinations in an individual^[15]
- d. Coping Checklist-1 (CCL-1) by Kiran Rao was used to assess the coping methods used by the police personnel. This scale is very comprehensive and is also very easy to administer. It is one of its kinds in the Indian setup. The CCL has three scales and seven sub-scales consisting of a total of 70 items. There is a problem focused scale (sub-scale: Problem solving), an Emotion focused scale (sub-scales: Distraction positive methods, Distraction negative methods, Acceptance/Redefinition, Religion/Faith, and Denial/Blame), and a Problem and Emotion focused scale (sub-scale: Social support).^[16]

The study sample was evaluated using the abovementioned tools of assessment on one-to-one basis by the authors.

Out of the 161 constables and head constables who initially enrolled in the study, 11 scored high on Lie Scale in EPQ and were excluded from the study. Thus, the final sample of the study consisted of 150 persons.

The "case" and "non-case" groups were then analyzed for differences in the socio-demographic profile, personality traits, and coping methods. The links between personality traits and coping methods were also explored.

Statistical analysis

The data collected was entered in excel sheets. The statistical analysis was done using SPSS v 10 software.

Independent 't' test, Chi-square test, and Pearson's correlation analysis were used to study the data. $P < 0.05$ was considered as statistically significant.

RESULTS

Socio-demographic profile

The study was done on a sample size of 150 police personnel consisting of 135 males and 15 females. The mean age of the sample was 42 years. The males heavily outnumbered females in the sample with M:F ratio of 9:1. The majority was made up of male ($n = 135$, 90%), married ($n = 142$, 94.6%), constables ($n = 124$, 82.6%). Based on the duration of service, the sample consists of 4 groups with 14% ($n = 21$) with 1-10 years of service, 52% ($n = 78$) with 11-20 years, 24% ($n = 36$) with 21-30 years, and 10% ($n = 15$) with >30 years of service.

Psychological distress

Based on a cut-off score of 4 on GHQ-28, a total of 53 persons (35.32%) were marked as "cases," which, in this study, meant people suffering from high psychological stress who were prone to developing psychiatric morbidity. The rest 97 persons (64.66%) were marked as "non-case" group. In the total sample, 35.55% ($n = 48$) of the males and 33.33% ($n = 5$) of the females were found to have high psychological stress. Comparing the "case" and "non-case" groups across socio-demographic variables such as age, gender, marital status, duration of service, and rank were not found to be significantly associated with the development of psychological stress. According to rank, 46.15% ($n = 12$) of head constables as compared to 33.06% ($n = 41$) of constables were found to be in the "case" group [Table 1].

Personality traits and psychological distress

The personality traits (evaluated by EPQ) across the "case" and "non-case" group were analyzed using the independent 't' test. The mean scores of psychoticism and neuroticism were higher in the "case" group, while the mean score of extroversion was high in the "non-case" group. The difference in these trait scores of the two groups was found to be statistically significant with $P < 0.001$ for both neuroticism and psychoticism and $P < 0.05$ for extroversion.

By Pearson's correlation analysis, neuroticism ($r = 0.603$) and psychoticism ($r = 0.288$) showed a positive correlation with higher GHQ scores, while extroversion ($r = -0.283$) was in negative correlation to GHQ scores [Table 2].

Coping methods and psychological distress

The most commonly used coping method in the whole of study sample was social support (72.55%), followed by acceptance/redefinition (64.72%) and problem-solving method (60.46%) [Table 3].

The most used coping method in “case” and “non-case” group was also that of social-support (73.20% and 72.16%, respectively).

When coping methods were compared across both the groups, it was found that negative distraction ($P < 0.001$) and denial/blame ($P < 0.001$) showed statistically significant association to the development of psychological distress. Negative distraction ($r = 0.404$) and denial/blame ($r = 0.358$) were also in positive correlation with high GHQ scores [Table 4].

Personality traits and coping methods

Research into the links between personality traits and coping methods or the “coping-trait” complexes brought up certain interesting findings. Using the Pearson’s correlation analysis on the study data, it was seen that psychoticism showed a positive correlation with coping items denial/blame ($r = 0.288$), negative distraction ($r = 0.295$), and problem solving ($r = 0.258$).

Neuroticism was also in positive correlation to negative distraction ($r = 0.190$) and denial/blame ($r = 0.412$).

Extroversion was positively correlated to coping item of positive distraction ($r = 0.181$) and in negative correlation with denial/blame ($r = -0.185$) [Table 5].

DISCUSSION

In this study, 35.33% of the police personnel in the sample were found to be suffering from psychological stress, which is consistent with the stress reported by Rao *et al.* in 28.8% of CISF personnel.^[2] Other studies such as that done by Geetha *et al.* in Bangalore police personnel found high stress levels in 60% of population,^[17] Deb *et al.* also found high stress in 79.4% of traffic constables in Kolkata. The higher levels of stress reported by these studies as compared to the present study could be because of socio-demographic and methodological differences in the studies. Several international studies in police personnel have also reported stress levels ranging 40–50% of the sample, but contrary to the present study, these studies have found higher psychological stress in female police persons.^[3,4,18] The reason for this could be that the number of females in the current study sample was very less compared to males, with a M:F ratio of 9:1. As the ratio of females in Indian police is quite less as compared to males, a bigger sample size is required to get a true representation of their stress levels and other study parameters.

No statistically significant difference was found between the two groups in relation to both marital status and the

length of service. There was no significant association found between rank and “caseness.” This shows that

Table 1: Relation between socio-demographic data and psychological stress

Variables	Total n (%)	Case n (%)	Non-case n (%)	Chi-square (x ²)	P value
Age (years)					
21-30	14 (9.33)	5 (35.71)	9 (64.28)	0.553	0.907
31-40	46 (30.66)	17 (36.95)	29 (63.04)		
41-50	65 (43.33)	21 (32.30)	44 (67.69)		
51-60	25 (16.66)	10 (40)	15 (60)		
Sex					
Male	135 (90)	48 (35.55)	87 (64.44)	0.029	1.000
Female	15 (10)	5 (33.33)	10 (66.66)		
Marital status					
Unmarried	8 (5.33)	4 (50)	4 (50)	0.796	0.454
Married	142 (94.66)	49 (34.50)	93 (65.50)		
Duration of service (years)					
1-10	21 (14)	7 (33.33)	14 (66.66)	5.304	0.151
11-20	78 (52)	22 (28.20)	56 (71.79)		
21-30	36 (24)	18 (50)	18 (50)		
31-40	15 (10)	6 (40)	9 (60)		
Rank					
Constables	124 (82.66)	41 (33.06)	83 (66.94)	5.869	0.053
Head constables	26 (17.33)	12 (46.15)	14 (53.85)		

n – Numbers; P < 0.05 is statistically significant

Table 2: Association between personality traits and psychological stress

Personality traits	Mean	T value	P value
Psychoticism			
Case	5.1321	4.609	0.000*
Non-case	3.5361		
Neuroticism			
Case	9.4906	8.931	0.000*
Non-case	4.3608		
Extroversion			
Case	13.0755	-2.304	0.023
Non-case	14.1443		

* P < 0.05 is considered as significant

Table 3: Coping methods used by case and non-case group expressed in percentages

Coping methods	Case group (n=53) (%)	Non-case group (n=97) (%)	Total sample (n=150) (%)
Problem focussed			
Problem solving	63.3	58.86	60.46
Emotion focussed			
Positive distraction	48.37	48.74	48.61
Negative distraction	25.35	12.71	17.18
Acceptance/redefinition	65.67	64.19	64.72
Religion	38.56	38.14	38.29
Denial/blame	41.67	27.62	32.60
Problem and emotion focussed			
Social support	73.20	72.16	72.55

n – Numbers

more or less the entire sample and both the groups had the same socio-demographic background.

In this study, neuroticism and psychoticism showed significant association with “case” group as well as positive correlation to high GHQ scores. Extroversion comes out to be significantly associated with the “non-case” group as well as showing negative correlation with high GHQ scores in this study.

This association of personality traits with experience of mental stress has been explored in a study by Francis *et al.* who correlated GHQ scores with neuroticism and introversion but not with psychoticism.^[19] Another study by Fontana *et al.* showed a positive correlation of stress with neuroticism and psychoticism and also a negative correlation between stress and extroversion traits.^[20] This very clearly illustrates that while people with these neurotic and psychotic personality traits are more prone to developing stress when faced with

the challenging tasks of police work, extroversion becomes a protective shield when dealing with the same. Extroversion as a personality trait is also less likely to be seen in people with high neuroticism scores.

The most frequently used coping skills across the study sample were found to be social support, acceptance/redefinition, and problem solving. A study done by Deb *et al.* in traffic constables in Kolkata police reported the following coping strategies used by them: Sharing problems with colleagues (72.6%), family members (62.9%), and friends (59.7%); becoming workaholic (64.5%); accepting reality (58.1%); viewing TV/listening music (56.5%); doing exercise (50%); becoming optimistic about future (43.5%); smoking more cigarette (29%); and devoting more time in religious activities (25%).^[11] A study by Madu *et al.* also lists using humor, social support, meditation, and delegation of responsibilities as coping strategies used by police persons.^[21]

In the current study, coping skills involving negative distraction, blame/denial showed a statistically significant association with the development of high psychological stress. Maladaptive coping behaviors such as excessive drinking and problem gambling have associated as a risk factor with high perceived work stress.^[11] While escape/avoidance increased stress, coping strategies of distancing and planned problem solving have been found to significantly reduce stress in police situations.^[22] Positive coping skills have been shown to have a stress-buffering effect.^[17] Thus, helping people to recognise their maladaptive coping methods, educating them about the mental harm caused by the same, and, at the same time, encouraging them to use good coping skills like yoga/meditation, exercise, seeking friend/family support, assessing and solving problems realistically, and using acceptance and prayer will help reduce psychological stress considerably.

In the present study, coping skills of denial/blame and negative distraction showed a positive correlation with both psychoticism and neuroticism. Extroversion had a positive correlation with positive distraction and negative correlation with denial/blame. Psychoticism has also shown a positive correlation with problem solving, but maybe the methods used by them to solve problems increases rather than decreases stress.

Table 4: Association of coping methods to psychological stress

Coping methods	Mean	t value	P value
Problem-focussed			
Problem-solving			0.122
Case	6.3396	1.557	
Non-case	5.8866		
Emotion Focussed			
Positive-distraction			0.905
Case	6.7736	-0.120	
Non-case	6.8247		
Negative-distraction			0.000*
Case	2.2830	5.724	
Non-case	1.1443		
Acceptance/redefinition			0.528
Case	7.2264	0.633	
Non-case	7.0619		
Religion/faith			0.905
Case	3.4717	0.119	
Non-case	3.4330		
Denial/blame			0.000*
Case	4.5849	5.438	
Non-case	3.0412		
Problem and emotion focussed			
Social support			0.647
Case	4.3962	0.459	
Non-case	4.3299		

*P<0.05 is considered significant

Table 5: Sample Pearson’s correlation coefficient (r) between personality traits, coping methods, and GHQ scores

	Problem solving	Positive distraction	Negative distraction	Acceptance/redefinition	Religion/faith	Denial/blame	Social support	GHQ score
Psychoticism	0.258*	0.036	0.295*	0.045	0.032	0.288*	-0.023	0.288*
Neuroticism	0.075	-0.034	0.190†	0.134	0.030	0.412*	-0.033	0.603*
Extroversion	0.125	0.181†	-0.049	0.077	0.156	-0.185†	0.079	-0.283*
GHQ score	0.062	-0.040	0.404*	0.110	-0.019	0.358*	0.086	1.00

GHQ-28 – General health questionnaire-28; *Correlation is significant at the 0.001 level (2-tailed); †Correlation is significant at the 0.05 level (2-tailed)

Conceptual links have been found between models of personality and coping with directive for future research to focus on coping “trait” complexes.^[23] Carver *et al.* in a study on personality and coping reported that meta-analyses link optimism, extroversion, conscientiousness, and openness to more engagement coping; neuroticism to more disengagement coping; and optimism, conscientiousness, and agreeableness to less disengagement coping.^[9]

Thus, we see that personnel with neurotic and psychotic traits are more likely to use maladaptive coping methods and so become even more prone to stress. Extroverts are less likely to suffer from stress by using good coping skills like positive distraction.

This interplay of stress, personality, and coping skills can give us some important directions to reduce stress in the police force in terms of both selection and training. A study done by Du Preez *et al.* on personality and mental health in South African police trainees advocates selection tools to be developed to identify vulnerable individuals during selection to prevent later problems with stress reactions and also additional training modules focussing on coping skills to reduce vulnerability to stress in trainees.^[24]

CONCLUSIONS

1. In this study, police personnel with high neuroticism or psychoticism traits were more likely to suffer from high psychological stress
2. Individuals using maladaptive coping methods like denial/blame and negative distraction were also more vulnerable to developing psychological stress when faced with rigors of the job
3. The association between personality traits and coping methods used by personnel was evident in this study.

Limitations

As the study was carried out in a small sample, it needs to be replicated in other multi-centric study samples.

Implications

1. Based on the findings of association between certain personality traits and high psychological stress, we can suggest that personality assessment can be made as a part of recruitment tests in police
2. It will also prove useful to assess stress, personality, and coping methods at multiple points during the service to recognise maladaptive behavior and, thus, take necessary corrective action
3. Workshops can be conducted to teach positive coping techniques like yoga and meditation so as to reduce mental stress in police.

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