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Original Research Article

Factors influencing the stress among the police personnel of Chitradurga city: a cross-sectional study

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ABSTRACT

Background: Policemen are the real heroes of our country, but most people are unaware of the amount of stress they face every day. Their work involves protecting life, safeguarding properties by vigilant patrolling and maintaining law and order in the society. Hence the present study on the police personnel of Chitradurga city will help to reveal the impact of their job on their day to day life. The objectives of the study were to find out the stress level among the police personnel; to assess the influence of demographic, occupational and personal factors on the stress.
Methods: A cross sectional study was conducted among the police personnel in the five police stations in Chitradurga city for a period of one year. Complete enumeration method was used to include 282 police men and women in the study. A pre-designed, pre-structured questionnaire was used to collect the data. The analysis was done using SPSS version 20. Appropriate statistical tests were applied.
Results: The mean age of the participants was 36.13±10.33. The participants in the study were predominantly males, 89%. About 70.9% of the study participants were found to be stressed - 38.7% had mild stress, 26.2% had moderate stress and 6% had severe stress.
Conclusions: The stress was found to be significantly associated with marital and socioeconomic status, station, shift work, having sustained injuries during work, attending court summons, smoking, alcohol consumption, tobacco chewing, less sleep and snoring.

Keywords: Police personnel, Health, Stress, Occupation

INTRODUCTION

Life is stressful no matter what profession you are in. Everyone encounters daily issues in their lives but being in an occupation with more job demands and responsibilities ultimately affects the health in the long run. Human service professions such as medicine, social work, nursing, teaching, public safety, child care and occupational therapy are viewed as high stress occupations. Individuals in these professions work intensively, intimately and continually with people who have serious physical, mental, emotional and social problems.[1] The report by occupational physicians and psychiatrists in the occupational disease intelligence network system for the surveillance of occupational stress and mental illness had listed police work amongst the top three most stressful occupations.[2]

According to the study sponsored by the Indian Bureau of Police Research and Development, nearly 90 per cent of police station staff worked for more than eight hours a day; 68 per cent of station house officers and over 76 per cent of supervisory officers had to remain on duty for 11 hours or more per day; more than 73.6 per cent of police station staff indicated that they were not able to avail weekly offs even once a month; 80 per cent of the staff

were commonly recalled to duty during their off time to deal with emergencies of law and order, VIP bandobasts or other matters; and three fourths of the respondents reported that the current working hour regime led to various kinds of health problems for them.[3]

Hence policemen have to deal with an assortment of unique situations and stressors on a regular basis. The physical and mental effects of this stress are well documented. Police personnel are more likely to commit suicide than a member of the general public. The numerous incidents of police brutality, high handedness, excessive use of physical violence, verbal abuse and the negative image of the police as being discourteous, inhuman, sadistic & inefficient prompt a curious observer to look beyond the surface and discover the underlying strain that exists. The highly paradoxical nature of the policeman's job makes it like tightrope walking and deserves a closer scrutiny than is accorded to it so far in our country.[4] So far only a few studies have been conducted among the police personnel in India and very little in Karnataka. Hence the present study on the police personnel of Chitradurga city will help to reveal their stress level and the various factors influencing the stress.

Objectives

- To find out the stress level among the police personnel.
- To assess the influence of demographic, occupational and personal factors on the stress.

METHODS

A cross-sectional study was conducted among the police personnel of Chitradurga city for a period of one year. Permission was obtained from the Superintendent of Police to conduct this study in all the five police stations. The study protocol was also approved by the Institutional Ethics Committee. The data collection was done from July 2014 to June 2015 by complete enumeration. A total of 282 police personnel who were available at the time of data collection constituted the study sample. A proforma was designed for the purpose of data collection and was pre-tested on 20 subjects (pilot study). The respondents were asked to identify any problems that they may have had with the questionnaire. Necessary alterations were made and the instrument was finalized. Routine roll-call was selected as the most appropriate time to undertake the study to ensure most of the participants were present. The purpose of the study and how to respond the questions was explained to each and every participant. Informed consent was taken before they participated in the study. A structured questionnaire, written in the local language (Kannada), was given to all the participants. The organisational police stress questionnaire (OPSQ) (McCreary & Thompson, 2006) is a 20-item instrument (α>0.90) which was used to measure police stress.[5] The OPSQ is a seven point intensity scale ranging from 1 ('No stress at all') to 7 ('A lot of stress'). An intensity of 4 represents 'Moderate stress' on the scale.

Inclusion criteria

Inclusion criteria were all the police personnel in the five police stations of Chitradurga city.

Exclusion criteria

Exclusion criteria were those who were not willing to participate in the study; policemen who had not completed a minimum of one year of service; those who remained absent even after five visits.

The data thus collected was entered in excel spread sheet. The statistical analysis was done using SPSS version 20. Mean and standard deviations were estimated for continuous variables. The association between various factors and level of stress were examined using the Chi-square test; $p<0.05$ was considered as statistically significant. Binomial logistic regression was used to determine the effects of significant demographic, occupational and personal characteristics on the stress level.

RESULTS

A total of 282 policemen in the five police stations of the Chitradurga city were studied. The mean age of the participants was 36.13±10.33. The participants in the study were predominantly males (251, 89%), females (31) constituted the remaining 11%. Figure 1 shows the presence of stress among the police personnel. According to the Operational Police Stress Questionnaire used, 38.7% had mild stress, 26.2% had moderate stress and 6% had severe stress. Therefore it was found that only 29.1% of the study participants were not stressed and the remaining 70.9% were stressed.

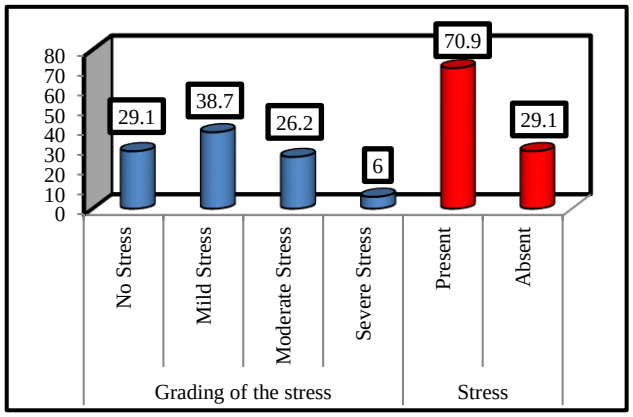

Figure 1: Stress among the policemen.

Table 1 shows the association between stress and the demographic characteristics of the study population. Those in the age group of 51 - 60 years were found to be

most stressful. Males were almost equally stressed as the females. Participants who were graduates, Muslim by religion, belonging to Three generation family, married, crossed 15 years of married life, having more than two children, whose spouse is not working, those not using contraception, belonging to socio-economic class II were more stressed when compared to their counterparts. However statistical significance ($p<0.05$) was found only with the marital status, contraception usage and socio-economic status.

Table 1: Demographic characteristics and stress among the police personnel.

Demographic characteristic		Stress		χ2 value	df	P value
		Present	Absent			
		N (%)	N (%)			
Age groups	21 - 30 yrs	66 (64.1)	37 (35.9)	6.267	3	0.099
	31 - 40 yrs	72 (74.2)	25 (25.8)			
	41 - 50 yrs	30 (68.2)	14 (31.8)			
	51 - 60 yrs	32 (84.2)	6 (15.8)			
Gender	Male	178 (70.9)	73 (29.1)	0.000	1	0.995
	Female	22 (71.0)	9 (29.0)			
Religion	Hindus	189 (70.3)	80 (29.7)	1.239	1	0.266
	Muslims	11 (84.6)	2 (15.4)			
Education	Middle school	2 (66.7)	1 (33.3)	7.102	3	0.069
	High school	14 (51.9)	13 (48.1)			
	PUC	77 (68.8)	35 (31.2)			
	Graduate	107 (76.4)	33 (23.6)			
Type of family	Nuclear family	122 (69.7)	53 (30.3)	3.525	2	0.172
	Joint family	57 (68.7)	26 (31.3)			
	Three generation family	21 (87.5)	3 (12.5)			
Marital status	Married	160 (76.6)	49 (23.4)	12.423	1	0.000
	Unmarried	40 (54.8)	33 (45.2)			
Years since marriage	≤ 15 yrs	107 (75.9)	34 (24.1)	0.108	1	0.743
	> 15 yrs	53 (77.9)	15 (22.1)			
No. of children	≤ 2	116 (73.9)	41 (26.1)	2.506	1	0.113
	> 2	44 (84.6)	8 (15.4)			
Contraception	Yes	26 (63.4)	15 (36.6)	4.907	1	0.027
	No	134 (79.8)	34 (20.2)			
Occupation of the spouse	Not working	119 (78.8)	32 (21.2)	1.539	1	0.215
	Working	41 (70.7)	17 (29.3)			
Socio-economic Status	I	100 (70.9)	41 (29.1)	9.343	2	0.009
	II	95 (74.8)	32 (25.2)			
	III	5 (35.7)	9 (64.3)			

Table 2: Occupational characteristics and stress among the police personnel.

Occupational characteristic		Stress		χ2 value	df	P value
		Present	Absent			
		N (%)	N (%)			
Station	Traffic Police	36 (76.6)	11 (23.4)	53.436	4	**0.000**
	Town Police	44 (91.7)	4 (8.3)			
	Rural Police	45 (76.3)	14 (23.7)			
	Kote Police	37 (92.5)	3 (7.5)			
	DAR	38 (43.2)	50 (56.8)			
Cadre	Constable	148 (70.8)	61 (29.2)	2.179	3	0.536
	Head Constable	42 (68.9)	19 (31.1)			
	Asst. Sub Inspector	5 (71.4)	2 (28.6)			
	Sub Inspector (SI)	5 (100)	0			
Length of service	≤ 10 yrs	89 (65.9)	46 (34.1)	3.398	2	0.183
	11 – 20 yrs	59 (73.8)	21 (26.2)			
	> 20 yrs	52 (77.6)	15 (22.4)			

Continued.

Occupational characteristic		Stress		χ2 value	df	P value
		Present	Absent			
		N (%)	N (%)			
No. of transfers	< 3	154 (69.1)	69 (30.9)	1.795	1	0.180
	≥ 3	46 (78)	13 (22)			
Shift work	Yes	143 (75.3)	47 (24.7)	5.322	1	0.021
	No	57 (62)	35 (38)			
Hours of work per day	≤ 10 hrs	47 (65.3)	25 (34.7)	1.494	1	0.222
	> 10 hrs	153 (72.9)	57 (27.1)			
No. of hours of standing per day	< 8 hours	92 (66.2)	47 (33.8)	2.980	1	0.084
	≥ 8 hours	108 (75.5)	35 (24.5)			
Sick leave taken in past one year	Not taken	147 (74.2)	51 (25.8)	3.554	1	0.059
	Taken	53 (63.1)	31 (36.9)			
Sustained injuries during work	Yes	29 (87.9)	4 (12.1)	5.211	1	0.022
	No	171 (68.7)	78 (31.3)			
Attended court summons	Yes	99 (86.8)	15 (13.2)	23.518	1	0.000
	No	101 (60.1)	67 (39.9)			

Table 3: Personal habits and stress among the police personnel.

Personal habits		Stress		χ2 value	df	P value
		Present	Absent			
		N (%)	N (%)			
Diet	Vegetarian	46 (78)	13 (22)	1.795	1	0.180
	Mixed	154 (69.1)	69 (30.9)			
Smoking	Yes	74 (90.2)	8 (9.8)	20.931	1	0.000
	No	126 (63)	74 (37)			
Alcohol	Yes	67 (94.4)	4 (5.6)	25.290	1	0.000
	No	133 (63)	78 (37)			
Tobacco chewing	Yes	56 (86.2)	9 (13.8)	9.503	1	0.002
	No	144 (66.4)	73 (33.6)			
Betel leaves	Yes	36 (81.8)	8 (18.2)	3.001	1	0.83
	No	164 (68.9)	74 (31.1)			
Exercise	Yes	101 (68.7)	46 (31.3)	0.730	1	0.393
	No	99 (73.3)	36 (26.7)			
Hours of sleep per day	<8 hours	141 (79.7)	36 (20.3)	17.604	1	0.000
	≥8 hours	59 (56.2)	46 (43.8)			
Snoring	Yes	76 (85.4)	13 (14.6)	13.205	1	0.000
	No	124 (64.2)	69 (35.8)			
Nightmares	Yes	27 (84.4)	5 (15.6)	3.168	1	0.075
	No	173 (69.2)	77 (30.8)			

Table 4: Binomial logistic regression of the various factors on stress.

Variables	B	S.E.	Wald	df	Sig.	Exp (B)
Shift work	0.544	0.336	2.632	1	0.105	1.724
Sustaining Injuries at work	0.978	0.623	2.467	1	0.116	2.659
Court summons	1.416	0.367	14.923	1	0.000	4.121
Smoking	1.389	0.558	6.193	1	0.013	4.012
Alcohol	1.323	0.725	3.331	1	0.068	3.756
Tobacco chewing	-0.596	0.530	1.266	1	0.260	0.551
Less Sleep	0.941	0.323	8.490	1	0.004	2.563
Snoring	0.900	0.398	5.107	1	0.024	2.460
Marital status	0.850	0.357	5.666	1	0.017	2.340
Constant	-1.749	0.443	15.629	1	0.000	0.174

Table 2 shows the association between stress and the occupational characteristics of the study population. Those working in Kote police station (92.5%) and Town police station (91.7%) were found to be more stressed when compared to the other stations – Traffic (76.6%), Rural (76.3%) and DAR (43.2%) (p=0.000). It was also found that Sub-Inspectors, policemen with more than 20 years of service and more than three transfers were more stressed. However the difference was not statistically significant (p>0.05). The police personnel working more than 10 hours a day, standing for more than 8 hours a day and those who had not taken any sick leave in the past one year were more stressed. But the difference was not statistically significant (p>0.05). Those who did shift work, sustained injuries during work and attended the court summons were more stressed and the difference was found to be statistically significant (p<0.05).

Table 3 shows the association between stress and the personal habits of the study population. Stress was found more among non-vegetarians, smokers, alcoholics, tobacco chewers, those who used betel leaves, didn't exercise, had less than eight hours sleep a day, snore during sleep and had nightmares. However statistical significance was found only for smoking, alcohol, tobacco chewing, hours of sleep per day and snoring (p=0.000).

Table 4 shows the binomial logistic regression with stress as the dependent variable. The factors found to be significant in chi-square analysis were included in logistic regression analysis. Among them attending court summons, smoking, less than 8 hours sleep per day, snoring and being married were revealed to be the most stressful factors among the study participants. The table also gives Exp(B) i.e. odds ratio; it shows that the risk of getting stressed was four times for those who attended court summons and indulged in smoking; whereas the risk was twice for those who slept less, snored and were married.

DISCUSSION

Majority of the participants were in the age group of 21-30 yrs and it was seen that the stress increases with age, as those above 50 years were found to be more stressed than the younger police personnel, which is in corroboration with the other studies.[6,7] This may be because the capacity to handle situations might lessen with the age. The association of age and stress was however not statistically significant (p=0.099). In this study, both the males and the females were equally stressed (71%). However there was no statistically significant association between gender and stress (p=0.995). Studies on Brazilian police and by Collins et al found more stress among the females.[6,8] Also, the stress increased with higher education. It might be because of the work assigned to the policemen according to their qualification, as those with better educational status might receive the difficult part and feel more responsibility to their work. Similar results were found by Naik et al.[9] The married ones (76.6%) were found to be more stressed than the unmarried ones (54.8%) and the association was found to be statistically significant (p=0.000). Those married for longer duration, having more than two children and not following any methods of contraception were more stressful. This might be because they have their work problems as well as the family troubles to tackle. Among the married ones, those whose spouses were working were found to be less stressful. It could be because the working people may understand the work pressure and occupational circumstances better than those spouses who were not on a job. Those in the higher socio-economic status were found to be more stressful than those in the lower socio-economic status. This may be because of the increased job pressure due to their higher cadre or position. This was in corroboration with the study by Naik et al.[9]

The police personnel in the Kote Police station were found to be most stressful, followed by those working in Town police station, Traffic police station, rural police station and finally the district armed reserve. This was statistically significant as well (p=0.000). This may be due to the difference in the work load in the various stations. A study by Geetha et al however reported more stress among the traffic police than the other police stations.[7] This could be due to the geographic differences in the studies. Those in the higher cadre i.e. Sub-inspectors were most stressed than the constables and head constables. This may be attributed because of increased responsibilities and work pressure due to the demanding nature of their job position. Also, those with more than twenty years of service, more than three transfers, more than 10 hours of work per day, more than 8 hours of standing per day were more stressed. Those who did shift work, had not taken sick leave in the past one year, sustained injuries during work and attended court summons were more stressed. This shows how much the increased burden of the job takes its toll on the policeman.

Working under tremendous pressure and stress may make police personnel alcohol and smoking dependent. In this study, 29.1% had the habit of smoking, which is less when compared to the studies by Kutlu et al in municipal police officers (49.1%), and Ponnuswami (76%); but high when compared to the studies by Ramakrishnan et al (23%) and Tharkar et al (11%). In this study, 25.2% consumed alcohol.[10-13] It was 45.7% in the study by Ramakrishnan et al, 20.8% in the study by Satapathy et al, 11% in the study by Tharkar et al and 72% in the study by Ponnuswami.[11-14] Only 23% had the habit of chewing tobacco in this study, but the study by Satapathy[14] had the addiction to as high as 48%. These differences in the percentage of prevalence of the habits among the policemen might be attributed to the difference in the geographical location and the cultural practices of the participants. Stress was found to be more among those who had the habit of smoking, drinking

alcohol, chewing tobacco and betel leaves. It may be because those who could be easily stressed might be more prone to develop these habits in the first place. This combination of smoking and alcohol could have a synergistic and detrimental effect on the deterioration of their health status. Exercise seemed to relieve stress as those who didn't indulge in exercise of any form were found to be more stressed than the others. The study also revealed that those who slept less than 8 hours per day, got nightmares during their sleep, had the problem of snoring were more stressed than the others.

In this study, only 29.1% were not stressed, 38.7% had mild stress, 26.2% had moderate stress and the remaining 6% had severe stress. Thus 70.9% were found to be stressed. The stress levels found in other studies were 74% in the study by Ramakrishnan et al, 33% in Deschamps et al and 54% in Deb et al.[12,15,16]

CONCLUSION

About 70.9% of the police personnel were found to be stressed. The stress was found to be significantly associated with marital and socio-economic status, station, shift work, having sustained injuries during work, attending court summons, smoking, alcohol consumption, tobacco chewing, less sleep and snoring. In logistic regression analysis, attending court summons, smoking, less than 8 hours sleep per day and being married were revealed to be the most stressful factors. The risk of getting stressed was found to be four times for those who attend court summons and indulge in smoking; whereas the risk was twice for those who sleep less, snore and were married.

Limitation

The cross-sectional nature of the design made it difficult to prove causal relationships. As self-administered questionnaire was used, the results were entirely based on the honesty of the participants and their perception towards the variables used in this study. The male predominance in the study population made it impossible to study gender-related patterns. The results cannot be generalized without conducting similar studies in other areas of the state/country to validate these findings.

Recommendations

Finally, research in police stress must go deep into those contextual variables like job demand, lack of resources, physical and psychological needs, and role of emotional intelligence in reducing stress. The study can be replicated in a different setting with a larger sample to yield better results.

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