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MENTAL STRESS OF CITY POLICEMEN IN NAGPUR: A CROSS SECTIONAL STUDY

Community Medicine

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ABSTRACT

Introduction - Occupational stress can be defined as the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources or needs of the workers. The challenge at the work may get turned into job demands that cannot be met, relaxation may get turned to exhaustion, and a sense of satisfaction may get turned into feelings of stress.

Material and Methods - It was Cross sectional study. Study setting were City Police stations till sample size achieved. Random selection of Policeperson was done.

Results - Prevalence of mental stress- 51%. Mental stress was found statistically significant for factors like age, education and length of service.

Conclusion - Prevalence of mental stress was high. The present study showed association of mental stress with socio-demographic factors like age and education, occupational factor like length of service with statistical significant difference. Mental stress was almost equally distributed in both genders.

KEYWORDS

mental stress, policemen

1. Introduction

Indian police personnel can be broadly categorized into constables, inspectors, and officers. The constables belong to the lowest strata; they obey commands of inspectors/sub-inspectors and impart assigned duties as part of police work. The inspectors are placed at the intermediate level; they are expected to investigate cases and registered first information report.[1]

Stress can be defined as a physiological response to physical and mental demands or "An interaction between environmental forces and events called stress precipitators, which appear threatening to the person's reaction to the threat.[2]

Stress is a complex phenomenon. An individual's experience of stress depends upon numerous aspects related to personality, environment, sociocultural situation, and several contextual factors. Occupational stress is a matter of concern in the current scenario. Occupational stress results in disruption of the psychological as well as physiological homeostasis of the individual, leading to deviant functioning in the working environment.[3],[4]

Occupational stress can be defined as the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources or needs of the workers. The challenge at the work may get turned into job demands that cannot be met, relaxation may get turned to exhaustion, and a sense of satisfaction may get turned into feelings of stress.[5]

Evidence from the Health and Safety Executive suggests that 20% of workers feel 'very' or 'extremely' stressed at work, with the proportion rising to 49% in some occupational groups.[6]

Police work has been identified as the most psychologically stressful and critical profession in the world.[4],[7],[8]

2. Aim and Objective

To study level of mental stress of city policemen and some epidemiological factors related to it.

3. Material and Methods

It was Cross sectional study. Study setting were City Police stations till sample size achieved. Random selection of Policeperson was done who have completed one year of job. Sample size was 178. Study conducted from sept 2015 -Dec 2017.

Inclusion Criteria: Policepersons completed one year of job & willing to participate

Exclusion Criteria: Policepersons who cannot be contacted for three successive visits.

Sample size:

It was calculated by assuming the prevalence of mental stress as 68.6% amongst policemen in Wardha city. Occupational stress among police personnel of Wardha city, India. Authors- Selokar D, Nimbarte S, Ahana S, Gaidhane A, Wagh V. (Australs Med J 2011;4(3):114 – 17).

The data collection was done between August 2016 and August 2017. Permission was obtained from institutional ethical committee and from the Commissioner of police. The study included 3 police stations in the city as per convenience. All eligible policemen selected randomly and examined till sample size met. Policeperson who could not be contacted for three successive visits were excluded. Informed consent was taken before they participate in the study. Routine roll-call was selected as the most appropriate time to undertake the study to ensure most of participants were present. However some participants completed the study proforma in their evening duty time. The aim of the study and how to respond the questions was explained to each respondent. Participants were contacted during routine roll call and some police personnel were contacted in evening. Proforma was filled during interview. A structured questionnaire was prepared in the local language.

A total 24 questions were included in the questionnaire about the respondent's own life. Validity of scale was 0.636 (Nasee and Ahme 2013).[9] Participant's verbal descriptions of perceived stress linked to a numerical scoring system with responses such as 'yes', 'no', 'often', 'sometimes', or 'very rarely' being given scores between zero and four, respectively. The total score from each respondent calculated and used as an indicator of stress, rather than a precise measurement tool. Scores were graded as: ≤15 = stress is not a problem in the life of personnel who scored this level of stress and no treatment is required. 16-30 = a moderate range of stress for a busy professional person. It indicates that it is worth looking at how stress can reasonably be reduced. Treatment like counselling, meditation, yoga, etc. may be needed. 31-45 = stress is clearly a problem, and the need for remedial action is apparent. The longer the individual works under this level of stress, the harder it often is to rectify the situation. 45-60 = at these levels, stress is a major problem, and something must be done without delay.

Variables studied in this study: Sociodemographic factors- Age, Gender, Type of family, Marital status and Socioeconomic status. Occupational factors- Designation, Duration of service and Working hours.

Pilot study was carried out before main study to assess the feasibility and test the Proforma and necessary changes were made accordingly. Study subjects having mental stress were prescribed appropriate treatment when required and appropriately referred to specialities for psychological counselling & related therapy.

Statistical Analysis-
Data was analysed and tabulated using frequency distribution tables and proportions. The significance of difference between various factors and level of stress analysed using the Chi-square test and Fisher exact test. Analysis of linear trend was done.

4. Results

Prevalence of mental stress- 51%. Mean mental stress score 16.46 ± 5.56(5-35) (Table1). Maximum study subjects were in the age group of 31-50 years i.e. 72% with similar distribution in males (77%) and female (56%). Mean age was 39.56±8.57 (26 – 56) years. Level of mental stress was more in police person aged above 40 than aged below 40. 82(53.95%) male police person and 20(41.67%) female police person had mental stress. 01(100%) widow police persons had mental stress followed by 97(52.72%) married police persons. 04(26.67%) unmarried had mental stress. Intermediate or Post high School Diploma passed police person i.e., 38(70.38%) had high mental stress followed by 13(61.91%) who had passed High School Certificate. 49(39.84%) of Graduate / Postgraduate passed had mental stress. The difference was not found statistically significant among police persons having education upto Intermediate or Post high School Diploma with others. Mental stress was more in Head constable 40(66.67%) followed by Naik Police Constables 19(59.38%). 05(45.46%) Sub-inspector and 37(39.37%) had mental stress. The difference of mental stress was found statistically significant among police persons having length of service >20 years with others. Mental stress was more in police persons having working hours per day >12 hours followed by upto 12 hours i.e. 96(51.62%), 06(42.86%) respectively.

Table 1. Distribution of study subjects according to mental stress score Professional Life stress scale- Fontana)

Mental Stress Score	Study subjects	
	No.	(%)
0-15 (Stress isn't a problem)	98	49.00
16-30 (moderate range of stress)	97	48.50
31-45 (Stress is clearly a problem)	05	02.50
46-60 (stress is a major problem)	00	00
Total	200	100

Table 2. Distribution of study subjects according to sociodemographic and occupational factors and level of mental stress.

sociodemographic factors	Categories	Total score		Total (%)	Chi-square value	p value
		≤15 = no stress (%)	>15= stress (%)			
Age group (years)	21-30	20 (64.51)	11 (35.49)	31 (100)	15.0632	<0.001
	31-40	49 (60.49)	32 (39.51)	81 (100)		
	41-50	23 (36.50)	40 (63.50)	63 (100)		
	51-58	06 (24.00)	19 (76.00)	25 (100)		
Gender	Male	70 (46.05)	82 (53.95)	152 (100)	1.7376	0.1874
	Female	28 (58.33)	20 (41.67)	48 (100)		
Religion	Hindu	83 (48.25)	89 (51.75)	172 (100)	0.1011	0.7505
	Bouddha	15 (55.55)	12 (44.45)	27 (100)		
	Muslim	00	01 (100)	01 (100)		
Marital status	Married	87 (47.28)	97 (52.72)	184 (100)	1.9235	0.1654
	Unmarried	11 (73.33)	04 (26.67)	15 (100)		
	Widow	00	01 (100)	01 (100)		
Education	Professional Degree / PhD	00	01 (100)	01 (100)	13.7837	<0.001
	Graduate/Post graduate	74 (60.16)	49 (39.84)	123 (100)		
	Intermediate or Post high School Diploma	16 (29.62)	38 (70.38)	54 (100)		
	High School Certificate	08 (38.09)	13 (61.91)	21 (100)		
	Middle school pass	00	01(100)	01 (100)		
Type of family	Nuclear	78 (48.44)	83 (51.56)	161 (100)	0.0194	0.8892
	Three Generation	20 (51.28)	19 (48.72)	39 (100)		
Designation	Asst. Inspector	01 (100)	00	01 (100)	0.2873	0.5919
	Sub-inspector	06 (54.54)	05 (45.46)	11 (100)		
	Asst. sub-inspector	01 (50.00)	01 (50.00)	02 (100)		
	Head constable	20 (33.33)	40 (66.67)	60 (100)		
	Naik Police Constables	13 (40.62)	19 (59.38)	32 (100)		
	Constables	57 (60.63)	37 (39.37)	94 (100)		
Length of service (In years)	1-5	29 (60.41)	19 (39.59)	48 (100)	15.5176	<0.001
	5-10	19 (57.57)	14 (42.43)	33 (100)		
	10-15	25 (69.44)	11 (30.56)	36 (100)		
	15-20	08 (38.09)	13 (61.91)	21 (100)		
	>20	17 (27.41)	45 (72.59)	62 (100)		
Working hours per day	Upto 12hrs	08 (57.14)	06 (42.86)	14 (100)	0.1259	0.7227
	>12 hrs	90 (48.38)	96 (51.62)	186 (100)		
Total	98(49.00)	102 (51.00)	200 (100)			

5. Discussion

Mean age was 39.56±8.57 (26 – 56) yrs. Mean age for male was 41.71±8.14 (27– 56) Yrs. Mean age for female was 32.75± 5.99 (26 – 55). Similar findings with Selokar D et al (2011) study in which minimum age of participants was 21 years while the maximum age was 57 years, with a mean age of 36 (SD ± 9.31) years. About a third of participants (34.3%) were in the age group 31-40 years.[10]

In this study, prevalence of mental stress was high (51%). Mean mental stress score was 16.46 ± 5.56(5-35); 97(47.50%) policemen scored between16-30 (moderate stress) & 5(2.5%) policemen scored between31-45 (severe stress). 53.95% male and 41.67% female study subjects had mental stress. Gender difference for mental stress was not found statistically significant. There were only male policemen in severe stress category. In Selokar D et al (2011) study, even more (66.7%) participants than present study scored between 15-30 which suggest that stress in workplace was likely to be causing a problem but only two personnel had a score of 31-45 where stress was clearly a problem on contrary to present study where five had stress more than 30, and the need for remedial action was apparent.[10]

In the present study, when age-wise mental stress studied, it showed increasing stress level with age (Linear trend with $p < 0.0001$). Level of mental stress was more in police person aged more than 40 than aged less than 40 which was found to be statistically significant (p value <0.001). Age is one of the risk factor responsible for stress. Similar findings were reported by Selokar D et al (2011) study [11] and Almale B et al (2014) study with P value- Age < 0.001.[12]

6. Conclusion

Prevalence of mental stress was high. Majority of them had moderate type of stress and few had severe type of mental stress. The present study showed association of mental stress with socio-demographic factors like age and education, occupational factor like length of service with statistical significant difference. Mental stress was almost

equally distributed in both genders.

7. References

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