



Impact of life events on development of personality disorder among traffic police personnel in Bangalore City

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Abstract

Stress has become a part of every one's life and the major contributors of stress could be daily hassles, stressful life events and environment or occupational exposure to stress. A number of research works has been carried out in the past on various factors causing stress on health of individuals. However cumulative effect of different types of stress on individual's emotional behaviour or abnormal personality traits is an area of research which has scope for more analysis. Researches in the recent past have revealed increase in environmental pollution and increased mortality and morbidity due to environmental pollution, especially among those individuals who are occupationally exposed to environmental pollution. Therefore, the present study has been carried out to find the impact of life events induced stress on development of personality disorders on traffic police personnel who are occupationally exposed to environmental pollution. A sample of 250 traffic police personnel working in 21 traffic monitoring stations of north, south, east, west, central, north east and south east traffic divisions of Bangalore city were selected for the study. Assessment of stress level due to life events and its influence on personality were carried through survey using General questionnaire, Social Readjustment Rating Scale (SRRS) questionnaire and Standardised Assessment of Personality- Abbreviated Scale (SAPAS) questionnaire. Association between stress levels due to life events and development of personality disorders was assessed statistically using Chi-Square test. The study reveals that association between SRRS scoring and SAPAS scoring among experimental group was found to be statistically significant ($\chi^2 = 13.36^*$, $P < 0.05$) compared to control group, ($\chi^2 = 0.14^{NS}$, $P > 0.05$). Work environment has an influence on life events and development of personality disorders in traffic police personnel in Bangalore city.

Keywords: Life events, Personality disorders, Traffic police, Work environment, Occupational health, Occupational stress.

Introduction

Stress is experienced by all forms of life, including human beings. According to Hans Seyle, the pioneer in stress related study, stress is defined as effect of any agent that seriously threatens the homeostasis of an organism. A stress is called as eustress if it strengthens the immune system of the body. But stress can become distress if the stress is much higher than the coping ability of individuals. The major categories of stress are environmental stress, psychological stress (emotional) and physiological stress¹. The environmental stress is a resultant of changes in the environmental parameters like noise, air pollution, heat and cold. The psychological stress is stress caused due mental, physical or emotional pressure. Biological stress refers to any condition that puts pressure and makes demand on both psychological and physiological systems in the human beings². Usually chronic exposure to a stress and poor coping ability of individuals to that stress results in physiological changes in the body causing illness or disorders as stress suppresses the immune system and affects the immune reactions of the body.

Every individual come across many stressful events in their life where some manage effectively and others struggle to cope. There are many researches to show that life events contribute to personality disorders or abnormal personality traits³.

There is a raised concern about the occurrence of stress related disorders and personality disorders in work place. In United Kingdom a total of 488,000 cases of work related stress, depression or anxiety was reported in 2015-16⁴.

National Mental Health Survey, 2016 conducted by Bengaluru-based National Institute of Mental Health and Neuro Sciences (NIMHANS) with the support of the Ministry of Health and Family Welfare revealed that an estimated 150 million people in India are in need of mental health interventions and care. The prevalence of personality disorders or stress related disorders were 2 to 3 times more in urban metros⁵.

The present study attempts to find the impact of stress due to life events on development of personality disorders in traffic

police personnel who are occupationally exposed to environmental stressors.

Objectives: i. To collect the background information of traffic police personnel using general questionnaire. ii. To study the common social stress among traffic police personnel using SRRS (Social Readjustment Rating Scale) scoring. iii. To screen the traffic police for risk of personality disorders using SAPAS (Standardised Assessment of Personality- Abbreviated Scale) scoring. iv. To assess the influence of social stress on personality status.

Materials and methods

The study was conducted on traffic police men working in various traffic monitoring stations in Bangalore city. 220 traffic police men working in traffic junctions of 21 traffic monitoring belonging to seven traffic divisions namely, North, south, central, east, west, north east and south east participated in the study and they constituted the experimental group. 30 traffic police personnel working inside the traffic management centre were selected as the control group. A three tier questionnaire was administered to all the 250 traffic police men namely general questionnaire, Social Re-adjustment Rating Scale (SRRS) and Standard Assessment of personality-an Abbreviated scale (SAPAS)^{6,7}.

The general questionnaire was designed to gather information regarding their socio-demographic profile and somatic status.

The Social Re-adjustment Rating Scale (SRRS) was used to understand the level of stress experienced by the individuals in the past year based on the life events. The questionnaire is an inventory of common stresses. Each life event is assigned a value in arbitrary life changing units chosen to reflect the relative amount of stress. The life changing events were assigned a value which is chosen to reflect the relative amount of stress. A total of 150 or less is good, suggesting a low level of stress and a low probability of developing a stress-related disorder. A score of 150 to 299 suggests medium level of stress. A score of 300 or more, suggests high level of stress.

Standardised Assessment of Personality – an Abbreviated Scale (SAPAS) was used to screen individuals who are at risk of personality disorder. The screening questionnaire consisted of eight questions with ‘yes’ or ‘no’ options and each question was designated with a score of 0 or 1. The score of individual traffic police obtained from the questionnaire was assessed. A score of 3 out of 8 was identified as individuals at high risk of having personality disorder.

Procedure: The survey was conducted with the permission of Additional Commissioner of Police of Bangalore city. The participants were solicited through their station heads. The purpose of the research and importance of the cooperation of the participants for the success of the study were explained before getting the questionnaire filled. All the three questionnaire were translated to the local language for effective response from the participants.

Sampling method: Stratified random sampling technique was adopted for conducting the survey. The experimental group were traffic police men working in various traffic junctions of the city. These traffic police men work in outdoor conditions where they are exposed to air pollution, noise and manage traffic congestion throughout their shift time on a daily basis. The control group work in indoor office conditions where they are away from exposure to outdoor air pollution and noise.

Data Analysis: Association between stress levels due to life events and development of personality disorders was assessed statistically using Chi-Square test.

Results and discussion

The present study comprised of three tier questionnaire administered on 220 traffic police men working outdoor (experimental group) and 30 traffic police men working indoor (control group). The study population belonged to age ranging between 21 and 60 years where majority of the study population belonged to 31 to 40 years in both experimental and control group.

Table-1: Classification of Respondents by SRRS Score

N=250

Stress level (SRRS Score)	Experimental		Control		χ^2 Value
	N	%	N	%	
Low (<150)	120	54.5	23	76.7	6.74*
Medium (150-299)	73	33.2	7	23.3	
High (>300)	27	12.3	0	0.0	
Total	220	100.0	30	100.0	

* Significant at 5% Level, χ^2 (0.05, 2df) = 5.991

Table-1: Reveals that social readjustment rating scale (SRRS) scoring among experimental and control group. It is found that majority of the respondents experienced low stress levels i.e. 54.5 percent among experimental group and 76.7 percent among control group. It is interesting to note that the control group experienced no high stress levels against 12.3 percent among experimental group. The SRRS scoring among experimental and control group was found to be significant.

Similar results were seen in a study carried out on police officers of Akron city. The study showed that police officers had higher life change unit scores (LCU) or SRRS scores than those who did clerical jobs in the office. Also it was found that individuals with higher LCU scores had higher cardiovascular risk factors than those with lower LCU scores⁸. The probable reason for control group showing zero high stress levels could be because of work environment. Traffic police personnel working in an outdoor environment is exposed to higher number of environmental stressors like particulate matter, heat, noise and continuous observation of high traffic density than traffic police working in indoor office environment. Earlier studies have shown that exposure to particulate matter causes depression⁹.

Table-2 shows the SAPAS scoring among experimental and control group. The table shows that traffic police who at the risk of personality disorders are higher among experimental group (42.7%) than control group (23.3%). The SAPAS scoring among experimental and control group was found to be significant. The traffic police in the experimental group i.e. those working outdoor showed higher risk of personality disorder than control group indicating the influence of work environment on personality of the individuals. Study carried out on municipal traffic police of Rome city has shown that police who worked outdoor were more maladaptive to stress than those police officers who worked indoor¹⁰.

Table-3 depicts the SAPAS scoring of different age groups among experimental and control group. It is found from the table that in both experimental and control group there was no significant difference in number of respondents with risk of personality disorders among different age groups i.e. in experimental group 25-40 years group 42.6% and 41-60 years group 42.9%. In control group 25-40 years group 27.3% and 41 to 60 years group 12.5%. The table reveals that SAPAS scoring among different age groups was statistically non-significant in both experimental and control group.

Table-2: Classification of Respondents by SAPAS score

N=250

SAPAS	Score	Experimental		Control		χ^2 Value
		N	%	N	%	
No risk of personality disorder	< 3	126	57.3	23	76.7	4.12*
Risk of personality disorder	3 & above	94	42.7	7	23.3	
Total		220	100.0	30	100.0	

* Significant at 5% Level, χ^2 (0.05, 1df) = 3.841

Table-3: Classification of Respondents by Age group and SAPAS

N=250

Group	Age group (years)	SAPAS						χ^2 Value
		No risk of personality disorders		Risk of Personality Disorders		Combined		
		N	%	N	%	N	%	
Experiment	25-40	62	57.4	46	42.6	108	100.0	0.01 ^{NS}
	41-60	64	57.1	48	42.9	112	100.0	
	Total	126	57.3	94	42.7	220	100.0	
Control	25-40	16	72.7	6	27.3	22	100.0	0.72 ^{NS}
	41-60	7	87.5	1	12.5	8	100.0	
	Total	23	76.7	7	23.3	30	100.0	

NS: Non-significant, χ^2 (0.05, 1df) = 3.841

Table-4 depicts the SRRS scoring among different age groups. It is evident from the table that majority of the respondents in experimental group among both the age groups i.e. 25-40years and 41-60 years belonged to low stress level group (48.2% and 60.7% respectively). Similar results were found in control group also i.e. 77.3% of 25-40 years and 75% in 41-60 years show low stress levels. Respondents showing high stress levels in experimental group did not differ among different age groups i.e. 11.1% in 25-40 years group and 13.4% in 41-60 years group.

of having personality disorders as compared to control group where only 23.3% were at risk of having personality disorders. It is evident from the findings that higher the SRRS score stress levels higher is the percentage of respondents at risk of having personality disorders. However the association between SRRS scoring and SAPAS scoring among experimental group was found to be statistically significant ($\chi^2= 13.36^*$, $P< 0.05$). It is interesting to note that the association between SRRS score and SAPAS score of control group was found to be non-significant ($\chi^2= 0.14^{NS}$, $P>0.05$). Studies on adverse life events have shown that it is a potential factor for depression¹¹.

Table-5 shows the association of SAPAS and SRRS score. The table revealed that 42.7% of the experimental group were at risk

Table-4: Classification of Respondents by Age group and SRRS Score N=250

Group	SRRS Score	Age group						χ^2 Value
		25-40 years		41-60 years		Combined		
		N	%	N	%	N	%	
Experiment	Low	52	48.2	68	60.7	120	54.5	6.48*
	Medium	44	40.7	29	25.9	73	33.2	
	High	12	11.1	15	13.4	27	12.3	
	Total	108	100.0	112	100.0	220	100.0	
Control	Low	17	77.3	6	75.0	23	76.7	0.02 ^{NS}
	Medium	5	22.7	2	25.0	7	23.3	
	Total	22	100.0	8	100.0	30		

* Significant at 5% Level, NS: Non-significant, $\chi^2 (0.05,2df) = 5.991$

Table-5: Classification of Respondents by SAPAS and SRRS Score N=250

Group	SRRS Score	SAPAS						χ^2 Value
		No risk of personality disorders		Risk of Personality Disorders		Combined		
		N	%	N	%	N	%	
Experiment	Low	82	68.3	38	31.7	120	100.0	13.36*
	Medium	33	45.2	40	54.8	73	100.0	
	High	11	40.7	16	59.3	27	100.0	
	Total	126	57.3	94	42.7	220	100.0	
Control	Low	18	78.3	5	21.7	23	100.0	0.14 ^{NS}
	Medium	5	71.4	2	28.6	7	100.0	
	Total	23	76.7	7	23.3	30	100.0	

* Significant at 5% Level, NS : Non-significant, $\chi^2 (0.05,2df) = 5.991$

Conclusion

The study revealed that common stressors of life has an influence on the individuals at the risk of personality disorders. SRRS scores and SAPAS scores did not differ with age. Work environment of the traffic police like daily exposure to noise, air pollution, crowding may influence the social stress and risk of personality disorders as SRRS score and SAPAS score are higher in outdoor traffic police than those traffic police who are working indoor.

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