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The Survey Of Cardio-Vascular Factor In Police Personnel

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Abstract

Police work is one of the most stressful occupations in the world due to their enormous stresses, uncertainty in work, lack of support from the department etc. They were suffering from different types of physical and mental disorders. But only a few studies were carried out in India.

The present study was conducted to the survey of cardio-vascular status of police personnel working in Amravati city, Maharashtra. Apart from questionnaire study and physiological study was measure on police personnel and similar number of other general people of same age group to survey the cardio-vascular risk factors of the police personnel.

After analyzing the data it was found that the police personnel suffer from more cardio-vascular risk factor than the general population. Body mass index, blood pressures were higher than the other general people of same age groups.

Introduction

Police work provides continuous service to the citizens. They have to serve round the clock for proper investigation; safety and justice. All police personnel have to prepare themselves for responding efficiently and properly even for the unforeseen and unpredictable incidents.

Police work has been regarded by few researchers as one of the stressful occupation in the world, some researchers also indicate that police personnel were exposed to different stressful situation which affect their health and performance. They showed that police personnel complained about physical health due to job stress. It has also been reported by some researched that police personnel suffer increased rates of cardiovascular and metabolic disorder, divorce rates and suicide that the general population. These work stresses lead to heart attacks, headaches and high blood pressure, abdominal pain, lack of appetite, backache, moreover psychosomatic symptoms are more acute in police personnel.

Police personnel face many stresses like chronic exposure to critical incident stressors as well as routine occupational and organizational stressors, such as high responsibility, contact with criminals, heavy work load irregular duty hours and other that may adversely affect sleep quality and health.

The present study aimed at evaluating the job stresses on cardiovascular profile of the police personnel working in Amravati city.

Methodology

Subject of the study was conducted on one hundred and five police personnel working in Amravati city, physiological studies were conducted after randomly taken thirty one police personnel which are non smokers, non alcoholic and working same and similar number of general people of same age group and same city. Police personnel of same age group and same city. Police personnel are broadly classified into two groups. The permission to study was obtained from the superintendent of police in Amravati city were taken for the study. From the subject, who took part in questionnaire study and consented for physiological test.

Questionnaire study: A detailed ergonomic questionnaire was developed and applied on one hundred five police personnel.

Physiological variables studied

- a) Heart rate: Pre working, and working heart rates were taken on police personnel with the help of digital polar heart rate monitor through at the duty hours.
- b) Blood pressure: Blood pressures were taken in resting condition before starting the duty as police personnel. With the help of properly calibrated sphygmomanometer and stethoscope.
- c) Body mass index (B.M.I.): Body Mass Index were taken in resting condition before starting the duty as police personnel with the help of roman body fat monitor.
- d) Physiological variables studied: Subjective feelings were measured on a five point scale. When very frequent in the scale mean eight and never means zero rating was calculated and mean were taken.

Result and Discussion

The ages of the police personnel and general people were between 35-45 years. Subjects of both groups were physically fit. 12 passing was the compulsory educational qualification of police personnel at the entry level of their service. Scholar observe that after joining police service, personnel were exposed to physical training and service related the theoretical classes for the building of capacity appropriate to the job for one year to one and half year duration. It was also studied that the unarmed police personnel did not exposed to regular physical training schedule during entire period of service after completion of mandatory entry level training courses.

Body Mass Index of police personnel and general people

It was observed that 53% of the police personnel working in police stations have attained over weight than general people (Figure). It was also seen that BMI of the police personnel working in the police stations are gradually increasing proportionately with the age of the subject.

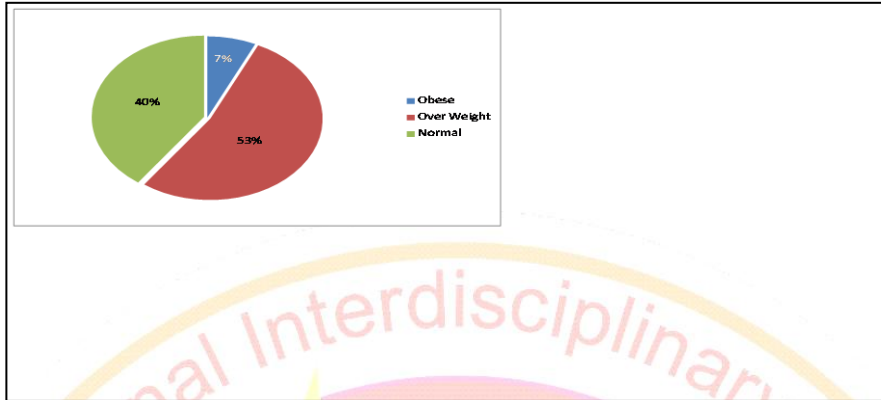


Figure 1:- Body Mass Index of Police Personnel

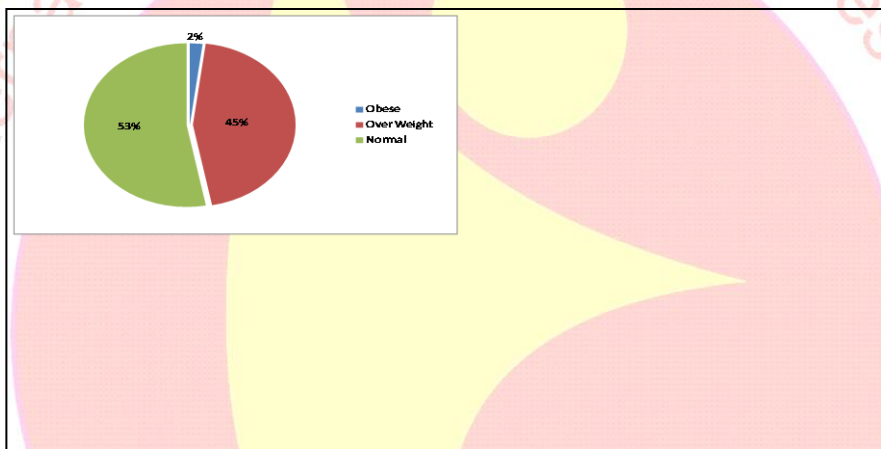


Figure 2:- Body Mass Index of General People

Health problems of police personnel

The study of relationship between the physiological stresses with the job of police personnel working in police stations, questionnaire study was conducted to acquire data about their physiological stresses and its effect on health. It was found from questionnaire studies that health complains as mentioned in the table were significantly increased after joining the service among these complains cardiovascular, gastrointestinal, sleep deprivation problems were increased during the service period. So to investigate the causes of cardiovascular complain detail physiological investigation was carried.

The police station sometimes in dusty and hot environment. Many times they do not get proper hygienic food during outside duty hours. So many times they have to face arrogant mob. Another factor affects their health studies.

Table 1

Complaints of Police personnel percent about health problems occurrence in percentage

Type of complaints	Police Personnel	Non-police personnel
Gastrointestinal problem	47.9%	16.3%
Cardiovascular problem	39.9%	20.2%
Nervousness/Anxiety problem	55.7%	15.8%
Pain in different body part	25.3%	11.2%
Sleep disturbance	50.5%	2.2%
Other problems	30.3%	25.3%

Psycho-Physiological stressors faced by police personnel

The frequencies of occurrence of different psycho-physiological stressors were given in graph. From the figure it was observed that heavy workload, injury during duty and irregular duty hours were stressors that were more frequent. Other common stressors were high responsibility contact with criminals.

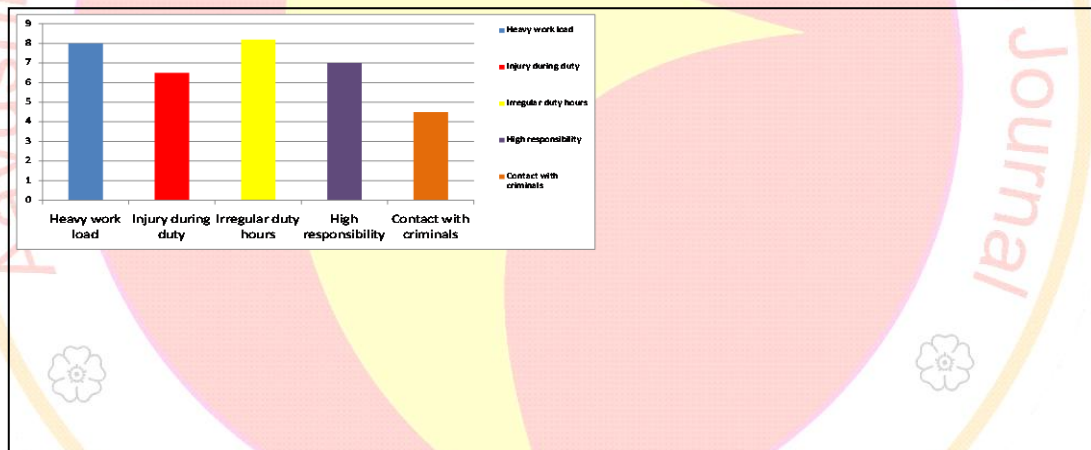


Table 2 Physiological profile of police personnel and general people

Variables	Police personnel (N =35)	General people (N = 35)	Remark
Age (Years)	41.61± 5.2	39.87 ± 3.93	
Systolic blood pressure	129.48 ± 5.02 (110 - 152)	125.87 ± 8.09 (110-140)	Highly Significant
Diastolic blood pressure	86.71 ± 8.62 (75-115)	82.80 ± 7.41 (70-111)	Highly Significant
Pre working heart rate	78.80 ± 8.33 (62-102)	76.58 ± 6.17 (68-90)	
Working heart rate	102 ± 9.23 (88-120)	101 ± 8.98 (87-118)	Highly Significant

Conclusion:

From the study it was observed that police personnel suffered from different health problems. The cardiovascular risk factors are also higher in them the general people population. It was also observed that blood pressure found above 130/85 mm/Hg. It was also found that after the completion of the training period, the police personnel had no any training schedule on daily physical activity. Due to enormous stress and high pressure they could not taken healthy diet and regular basic exercise. So BMI of the police population. Therefore they have higher risk of cardiovascular diseases. The age group of police personnel were 35-45 years. Due to the low group of police personnel, their physical problems were low but in the long run process they will suffer more physical problem than new.

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