

# A Prevalence Study of Risk Factors for Chronic Diseases among Police Personnel in a Metropolitan Area

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## Research Article

**Abstract:** Police are backbone for maintaining law and order within the limits of city. Their motto is 'to protect the good and punish the evil'; but they are themselves punished by the evil—CHRONIC LIFESTYLE DISEASES. They suffer from stress related to their work-uncertain duty hours, transferable jobs, inadequate sleep, addiction to alcohol and tobacco. Hypertension, diabetes, acute coronary syndromes, obesity and even cancer are some of the major chronic health diseases commonly observed due to their hectic and stressful lifestyle. This study was carried out to assess the risk factors among police personnel, contributing to chronic diseases like obesity, hypertension, diabetes and creating awareness of the same. It emerged that almost 49% of police personnel in study population of 443 were overweight, alcohol and tobacco consumption accounted to 28%, 20% were hypertensive, 11% diabetics and smoking observed in 8%. This study provided us with data about the health status in police community and will help us in devising new strategies to bring about a healthy change in their life style. Such study if carried out periodically will help reduce the rampant problem of chronic health diseases in police community at primordial level.

## Introduction

India is slowly and steadily acquiring the status of the global chronic disease capital. By 2025, India will have the dubious distinction of having 70 million diabetics, 213 million hypertensives and 60 million arthritics. The cost of these including welfare losses is estimated to be Rs. 150200 crores by 2015. According to the WHO report Preventing Chronic Diseases - A vital investment, 388,000,000 people will die in the next 10 years of a chronic disease. A significant proportion of this will be in India<sup>1</sup> A combination of the "thrifty gene hypothesis" (i.e. our genetic predisposition towards obesity and diabetes) and frantic lifestyle has brought us on the brink of a healthcare catastrophe.—Effective sustainable interventions, and the knowledge to implement them, have been shown to work in many countries. If existing interventions are used together as part of a comprehensive integrated approach by the government, the private sector and the civil society, the goal of preventing chronic diseases can be achieved.

Police are backbone for maintaining law and order in the society, but they are themselves being punished by the evil—CHRONIC LIFESTYLE DISEASES. They suffer from stress problems due to day and night work; their life style is hampered due to uncertain timings of duty. They go through lot of stress due to their work in shifts, transferable jobs, inadequate sleep and addiction to alcohol and tobacco. High blood pressure, diabetes and obesity are outcomes of their stressful work which should be curbed for their sound health. Apart from diseases of the body, frustration and dejection pave way for increased stress. During festivals which last for more than a week, constables often work for more than stipulated hours at a stretch. This may take a heavy toll on their health. Stress can cause hypertension, joint pains, high blood pressure, diabetes as well as paralytic strokes and heart attacks. The 6 police stations in a particular zone in a metropolitan area were chosen to carry out this study.

Our study was carried out with following Aims and Objectives:

- 1) Assess the risk factors among police personnel, contributing to chronic diseases like obesity, hypertension, and diabetes and creating awareness of the same.
- 2) Evaluate the conditions of personnel suffering from above mentioned chronic diseases by doing thorough examination and investigation.
- 3) To take constructive feedback from police personnel about the project which will help to plan further effective strategies for prevention and control of the chronic diseases.

## Methodology

Consent was taken from appropriate authorities to carry out the study.

**Place of study:** 6 Police stations in a metropolitan area.

**Sample size:** 443 police personnel of all cadres from 6 police stations.

Study included taking thorough history about present and past medical complaints in relation to chronic diseases, taking physical measurements like Body Mass Index, Waist Hip Ratio, measuring Blood Pressure<sup>2</sup> and testing for Blood Glucose using standardised glucometer.

Number of police personnel covered under each police station were as follows:

Police Station	No. of police personnel
Number 1	96
Number 2	85
Number 3	80
Number 4	71
Number 5	57
Number 6	54
Total	443

The health check up of all police personnel was conducted step wise , history taking included asking

### Observations and Results

**Observation of phase-1(in %)** were as follows:

**Table 1.** Prevalence of various risk factors responsible for chronic health diseases (in %)

Police Station	Number 1	Number 2	Number 3	Number 4	Number 5	Number 6
<b>Known DM</b>	8.3	3.5	8.45	11.7	6.25	11.1
<b>Newly diagnosed IGT</b>	4.1	5.26	2.81	2.35	1.25	-
<b>Known HTN</b>	8.3	-	12.67	18.8	6.25	12.96
<b>Newly diagnosed HTN</b>	5.2	3.5	18.30	10.5	17.5	7.4
<b>Overweight</b>	41.6	38.59	61.97	40	58.25	59.25
<b>Tobacco consumption</b>	33.33	24.56	30.9	18.8	28.75	31.48
<b>Alcohol consumption</b>	29.16	28.07	36.6	24.7	35	12.96
<b>Smoking</b>	6.25	10.52	8.4	7.05	10	5.55

- DM- diabetes mellitus
- IGT- impaired glucose tolerance
- HTN- hypertension- BP>140/90 mmHg
- Overweight- BMI>25

**Table 2.** Observation of risk factors in all police personnel ( in %)

	Known DM	Newly diagnosed IGT	Known HTN	Newly diagnosed HTN	Over weight	Tobacco Consumption	Alcohol consumption	smoking
<b>% of police-men</b>	8.3	2.7	10.1	10.6	49.43	27.99	28.44	7.9

questions regarding risk factors of chronic diseases. History regarding consumption of tobacco, alcohol and smoking was asked. It was followed by measuring Body Mass Index, Waist to Hip Ratio, Blood Pressure and testing Blood Glucose. Standardization of parameters was as follows:

- 1) Criteria for overweight <sup>2</sup>:  
BMI > 25 and WHR >1
- 2) Criteria for predisposition to hypertension <sup>2</sup>:  
BP > 140/90 mm Hg.
- 3) Criteria for predisposed to diabetes <sup>2</sup>:  
Blood glucose > 200 mg/dl on standardized glucometer
- 4) Criteria for tobacco, alcohol and smoking consumption:  
Any amount of tobacco, alcohol and smoking for any amount of time on repeated occasions was considered as risk factor in a study.

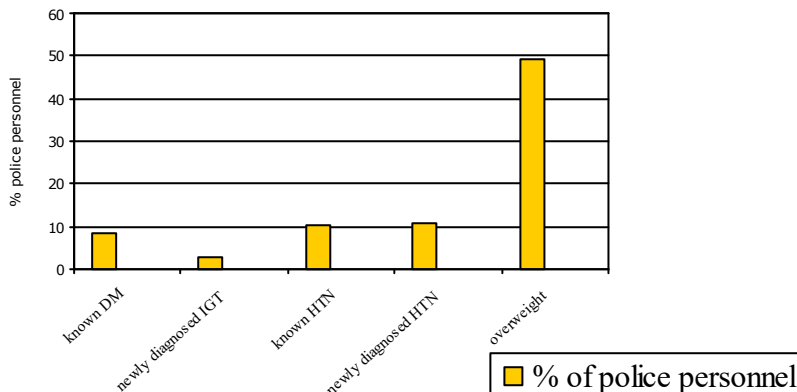


Fig. 1. Graph showing percentage of police personnel with risk factors of chronic diseases

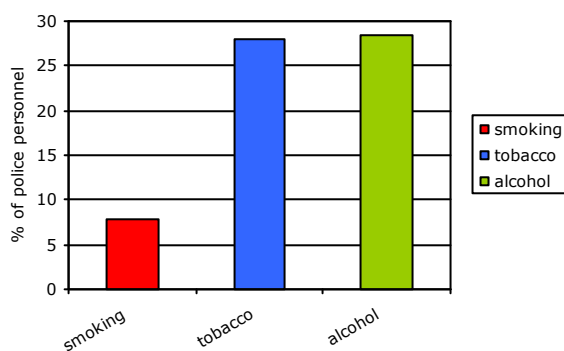


Fig. 2. Graph showing percentage of police personnel consuming tobacco, alcohol and smoking.

The risk factors towards chronic diseases seen in grave proportion in metropolitan police personnel were – overweight (49.43%), alcohol consumption (28.44%), tobacco consumption (27.99%), hypertensive (20.7%), diabetics (11%) and smokers (7.9%).

Based on history given, significant level of stress level was also encountered among police personnel.

### Conclusion

After the entire study it came to light that many personnel were suffering from risk factors responsible for chronic diseases especially overweight amounting to almost 49%. Hence such project should be carried out periodically to make people aware about the rampant problem of chronic diseases in the society and to curb the diseases at primordial level. Recreational activity should be promoted not only to relieve stress but also physical activity which will help reduce obesity, hypertension and diabetes. Reasons for high level of stress must be found out by proper individual counseling and prompt measures should be taken against it. Increase the man power and reduce the work load is one of the measure to reduce work related stress. This study was limited to police community and measures were taken to create awareness regarding reducing stress, dietary advice and proper preventive measures. Such projects should be

implemented on wider scale comprising of maximum possible community members from different communities. The cumulative social and economic impact of these measures is bound to be immense. It is indeed beneficial if we take quick action before it's too late as it is rightly said, 'PREVENTION IS BETTER THAN CURE.'

### Bibliography

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