

Original Research Article

Deciphering the health profile of police personnel in the Jaipur Commissionerate

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ABSTRACT

Background: Since its founding, the police force has required its employees to operate in hazardous and stressful conditions, and today's force is exposed to physically demanding tasks, irregular working hours, high levels of stress, and encounters with dangerous situations. Dealing with some of society's most difficult social problems. It is a line of work in which employees may be exposed to traumatic situations in which their health and well-being are directly jeopardised. Unhealthy lifestyles and demanding work conditions predispose the police force to a variety of non-communicable as well as communicable diseases.

Methods: A descriptive, cross-sectional study was conducted between May 2018 and November 2020 on a representative sample of 4263 across various ranks and units posted in the jurisdiction area of the Jaipur commissionerate.

Results: The age group of the study was from 35 to 60 years of age, with a mean age of 50 years. Out of the total sample, the response rate was 96%. The average height and weight were 173.09 cm and 77.48 kg, respectively. The basal metabolic index (BMI) was 25.9 on average.

Conclusions: By improving the overall well-being of police officers, not only can their quality of life be enhanced, but their effectiveness in ensuring public safety and maintaining law and order can also be optimised.

Keywords: Hypertension, Health profile, Jaipur commissionerate, Physical activity, Police personnel

INTRODUCTION

Police personnel represent the frontline of law enforcement. They play an important role in maintaining public safety and order. Since its founding, the police force has required its employees to operate in hazardous and stressful conditions, and today's force is exposed to physically demanding tasks, irregular working hours, high levels of stress, and encounters with dangerous situations.¹ Dealing with some of society's most difficult social problems. It is a line of work in which employees may be exposed to traumatic situations in which their

health and well-being are directly jeopardised. Unhealthy lifestyles and demanding work conditions predispose the police force to a variety of non-communicable as well as communicable diseases.²

The health and well-being of police officers are crucial not only for their personal quality of life but also for their effectiveness in maintaining public safety. In India, there is a scarcity of epidemiological data on the morbidity profile of police officers.³

The purpose of this study is to shed light on the health profile of police officers assigned to the Jaipur

commissionerate in Rajasthan, a state in northwestern India, and to provide insights that could drive targeted interventions to improve their health and overall performance. Using a combination of surveys, medical exams, and statistical analysis, this study investigates several aspects of physical health, lifestyle variables, and potential preventive strategies to improve the overall health and quality of life for police officers in the state.

METHODS

A descriptive, cross-sectional study was conducted between May 2018 and November 2020 on a representative sample of 4263 across various ranks and units posted in the jurisdiction area of the Jaipur Commissionerate. Those police personnel who were absent and posted out of Jaipur Commissionerate on the day of the survey and examination were excluded from the study. The Additional Commissioner of Police, Jaipur Commissionerate, and Superintendent of Police, Jaipur, were contacted, the motive of the study was explained, and approval was received for conducting the study. On visiting the police station, the officer in charge was contacted for help and support to carry out the study.

Prior to the start of the main study, a brief pilot study was conducted in the Reserve Police Lines Dispensary, Jaipur, on a smaller sample size to determine the sociodemographic characteristics, including age range, strata of job hierarchy, income, service years, and basic anthropometric measurements.

In the main study, the participants were incidentally selected from the area of jurisdiction by the investigators.

Study tool

A predesigned, pretested, and internally validated ($\alpha = 0.63$) questionnaire was used as a study tool for the study participants based on the MD Stat Android-based application for assessing their overall health profile. The questionnaire was divided into multiple sections to gather information on demographics, work-related factors, lifestyle habits, and self-reported health issues.

Data collection

The targeted sample size were contacted at their workplaces and were explained about the purpose of the study. Upon receiving their consent for participation in the present study, they were given appointments at a mutually convenient time to respond to the questionnaires and get themselves evaluated on multiple parameters by the team of investigators.

Medical Assessments: Physical health parameters such as body mass index (BMI), blood pressure, and cardiovascular fitness were measured for each participant.

Statistical analysis

Data was entered, coded, and tabulated into Microsoft Excel Version 10. Statistical analysis was performed using appropriate methods, including descriptive statistics and inferential tests, to identify trends and the health profiles of study participants. A simple frequency format was used for categorical variables. The standard deviation was applied wherever needed.

RESULTS

The age group of the study was from 35 to 60 years of age, with a mean age of 50 years. Out of the total sample, the response rate was 96%. The average height and weight were 173.09 cm and 77.48 kg, respectively. The basal metabolic index (BMI) was 25.9 on average.

The findings of the study provided some significant insights into the health profile of Rajasthan police personnel. In Table 1, the bulk of the study participants (97.4%) are male, with FC constituting the majority of the sample.

Table 1: Demographic profile of study participants (n=4263).

Variable	Sub class	Frequency	Percentage
Age (years)	<40	19	0.4
	41-50	2135	50
	51-60	2109	49.6
Gender	Male	4152	97.4
	Female	111	2.6
Post held	Higher officials (ACP, SP, Add SP, Dy SP)	12	0.3
	SI	100	2.3
	ASI	592	13.8
	CI	31	0.8
	HC	1359	31.8
	FC	2169	51

Physical health

A considerable proportion of police officers (57.7%) had BMIs that were higher than recommended, indicating a prevalence of overweight and obesity. Sedentary lifestyles and irregular eating habits were identified as risk factors (Table 2).

Table 2: Health profile of study participants based on assessments and self-reported data (n=4263).

Indicator	Sub class	Frequency	Percentage
BMI	<18	39	1
	18.1-25	1765	41.3

Continued.

Indicator	Sub class	Frequency	Percentage
	25.1-40	2459	57.7
Pulse rate (beats/min)	Normal (60-100)	4223	99
	Bradycardia (<60)	40	1
	Tachycardia (>100)	0	0
Hypertension	Present	2003	47
	Absent	2260	53
Diabetes	Present	789	19
	Absent	3474	81
Alcohol (self-reported)	Consume	819	19
	Do not consume	3444	81
Tobacco (self-reported)	Consume	707	17
	Do not consume	3556	83
Substance abuse (self-reported)	Yes	663	16
	No	3600	84

Cardiovascular health

Elevated blood pressure levels were observed in a substantial proportion of participants (47%), potentially linked to stress and inadequate physical activity.

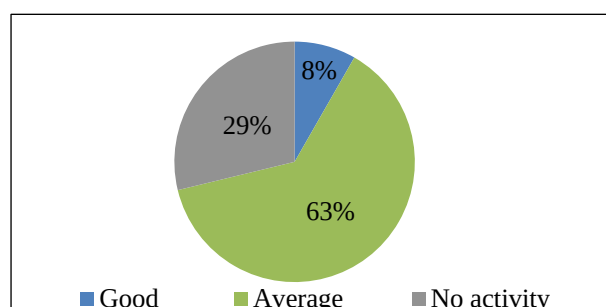


Figure 1: Showing physical activity profile of study participants.

DISCUSSION

Mean body mass index

In the present study was 25.52 ± 3.67 kg/m² which is in line with Delhi Policemen showing mean BMI 25.6 ± 3.6 and Kolkata with mean BMI of 24.08 ± 2.8 .^{1,2} Overweight (BMI>25) policemen were 22% and Obese (BMI>30) category were 35.7% in present study which is very similar to Pondicherry study showing overweight 25.3% and Obese 51.6%.¹

Mean systolic blood pressure was 128.36 ± 7.0 while a study among police personnel done at Chennai had mean systolic blood pressure 128.3 ± 18.8 and Kolkata showed mean systolic blood pressure 130.81 ± 13.43 .² Mean diastolic blood pressure in present study was 80.62 ± 3.66 which is lower as compared to Chennai (85.5 ± 12.5) and Kolkata (82.08 ± 7.06). Prevalence of diabetes was 7.6% in police officers of present study which is lower than Delhi

(12%), Kerala (12.5%), Mumbai (12.7%) and Pondicherry (33.6%).³

Lifestyle factors

Irregular working hours, limited access to healthy food options, and insufficient opportunities for physical exercise were common issues faced by police officers.^{4,5} Smoking and excessive caffeine consumption were prevalent among certain age groups. Tobacco addiction was found in 45% policemen in present study which is much lesser than Delhi (33.5%), Pondicherry (23%) and even much than Gujarat State Tobacco addiction (38.7%) among adult men.⁶ Addiction was more common in participants having field duty compared to those having only office duty. Also, addiction was more common amongst lower cadre of participants. Possible reason may be their work in field duties.^{7,8}

The results of this study emphasize the pressing need for targeted interventions to improve the health and well-being of police personnel in Rajasthan.⁹⁻¹¹

This study has some limitations. This study provides a snapshot of the health profile of police personnel in Rajasthan at a specific point in time and geographical area. Longitudinal studies tracking changes in health parameters over time would offer deeper insights. Additionally, qualitative research exploring officers' perspectives and experiences could provide a more holistic understanding of their health challenges.

CONCLUSION

The health profile analysis of police personnels in Rajasthan underscores the need for comprehensive interventions to address their physical and mental health challenges. By improving the overall well-being of police officers, not only can their quality of life be enhanced, but their effectiveness in ensuring public safety and maintaining law and order can also be optimized.

Collaborative efforts between law enforcement agencies, healthcare professionals, and policymakers are essential to bring about positive changes in the lives of these dedicated individuals.

Recommendations

Potential strategies include: Health education: Implementing workshops and seminars to raise awareness about the importance of balanced diets, regular exercise, and stress management techniques, Workplace wellness programs: Introducing wellness initiatives within police departments to encourage physical activity, offer healthier food options, and provide mental health support; Periodic checkups and follow-ups of police personnel with hypertension and other non-communicable diseases should be made a priority.

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