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Unmasking the health problems faced by the police personnel

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ABSTRACT

Aim: To assess the health problems of the police personnel under Vijayawada police commissionerate 2. To make the health check ups regular and 3. To make the physical fitness programme mandatory for them. **Study design:** cross sectional study **Methodology:** Health check up was done for 617 police personnel from 12.11.09 to 4.12.09. In the morning hours, a group of junior doctors, paramedical staff and technicians visited the police dispensary to do the general check up, take blood samples and ECG. The following afternoon a group of specialists visited to check the same patients along with their reports to make the final diagnosis. **Results:** Out of 617 police personnel 259 (42%) were overweight/obese, lack of physical activity was found in 397 (64%) of them, alcohol consumption was present in 148 (24%) and smoking in 136 (22%) of the police personnel. Diabetes was diagnosed in 229 (37%) and hypertension in 203 (33%). Anemia was detected in 154 (25%), visual abnormalities in 59 (10%), lipid abnormalities in 185 (30%), liver function test abnormalities in 31 (5%), ECG abnormalities in 25 (4%), renal function abnormalities in 6 (1%). **Conclusion:** A Physical fitness Schedule along with Stress alleviation techniques to be made mandatory for the police personnel to keep them physically and mentally fit, to perform critical job functions, to alleviate stress, and to improve their quality of life. Routine health checkups should be done to detect lurking dangers.

Key words: police personnel, law enforcement, stress, periodic health checkup

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Introduction: The police are the law enforcement personnel. They deal on a regular basis with an assortment of unique situations and stressors. The shock of each tragedy and violent event takes a cumulative physical and mental toll on each police officer in some way or the other. Increased demands of work impinging upon home life, lack of consultation and communication with the higher authorities in the organization, lack of control over workload and inadequate support have been identified as the potential factors responsible for the

stress in the policemen^{1,2}. For the longest time in law enforcement, the police are trained in policing, but not about how to maintain their mental and physical well being.

On an average police officers work twelve hours every day and sometimes even put in 36 hours at a stretch during VIP bandobasts and festivals. Unlike other jobs, the police officers start the day with bad news. There is only negative feedback in terms of how many murders, robberies and rapes have taken

place the previous night. Working throughout the day in such an atmosphere produces adverse psychological effects. Moreover long working hours, irregular eating habits, sleepless nights, shift duties and disturbed personnel life produces stress in the police officer's life and they become vulnerable to various disorders³.

The police subculture tends to protect the macho image of the police and informally teaches its members to follow a code of silence. They are conditioned to respond to a variety of situations and be under complete emotional control while doing so. Suppression of emotions like anger, fear, and grief has negative consequences on the immune system and deteriorate the physical health^{4,5}. To alleviate the stress the police officers tend to go into maladaptive behaviors like drinking, smoking and overeating, which contribute significantly, to this deterioration⁶. The impact of an unhealthy or mentally impaired police officer has implications not only for the individual officer, but also for the society as a whole. A mentally and physically fit officer will respond more appropriately in a variety of situations that they encounter.

As a police recruit, emphasis is placed on both physical and mental fitness. The initial hiring process mandates certain physical fitness requirements as well as a psychological testing process. However the assessment of the well-being of its officers throughout their career is not done. Although Police departments perform regular maintenance of firearms, vehicles and other equipment, and therefore recognize the importance of this process yet there is no mandatory scheduled regular health check up program for the officers themselves.

This study was conducted to assess the health problems of the police personnel, so that physical fitness programme and stress alleviation techniques can be made mandatory to them to improve strength, endurance, reduce stress, anxiety and depression. Regular health checkups are must so that the diseases can be detected early and can be taken care of.

Material and Methods : A cross sectional study was conducted by Pinnemeneni Siddhartha Institute of Medical Sciences from 12.11.09 to 4.12.09 at the city police Parade Ground Dispensary in Vijayawada. In the morning hours a group of junior doctors, paramedical staff and technicians visited the police dispensary. Physical parameters such as stature and body weight were measured with an anthropometric rod and a properly calibrated weighing machine respectively to calculate BMI. History of present illness,

past history, personnel history and family history was noted using a predesigned proforma Blood pressure was measured by mercury sphygmomanometer in sitting position. Systolic blood pressure > 160mm and/ or diastolic blood pressure > 95mm of mercury or any subject on anti-hypertensive treatment was regarded as the criteria for diagnosis of hypertension⁷. Subjects with body mass index (BMI) $\geq 30\text{kg/m}^2$ were regarded as obese, 25.0–29.9 as overweight and with BMI 18.5–24.9 as normal⁸. Leisure time physical activity > 30 minutes a day and for at least 3 days in a week was supposed as the regular physical activity⁹. Subjects who smoked regularly or smoked at least one cigarette on an average each day during previous 30 days were defined as the current smokers¹⁰. Subjects currently consuming alcohol or left this habit within 6 months were considered as alcoholics.

Paramedical staff collected the urine and blood samples. The technician took ECG. For Biochemical evaluation: Venous blood sample was collected after a minimum of 10 to 12 hours of overnight fasting. Fasting serum sample was used for estimation of lipid profile. For diagnosing diabetes, fasting plasma glucose of 126mg/dl or above was taken. Blood urea nitrogen, serum creatinine, urine routine and microscopic examination was done to detect renal function abnormalities. Blood tests for serum bilirubin and liver enzymes were done to detect liver function abnormalities.

The following day afternoon the same set of patients along with their reports were re examined by the specialists from General medicine, General Surgery, Orthopedics, Ophthalmology, Otolaryngology. They were treated and advised about their conditions. If anybody was found to be suffering from any serious ailment, he was referred to the concerned specialty of Pinnamaneni Siddhartha Institute of Medical Sciences. The authors briefed the team about the study to all the junior doctors, specialists and the technicians and accompanied the team everyday to collect the data. Sample size was not determined as all the police personnel aged 40 years and above of Vijayawada city were examined. The health profile of 617 police personnel aged 40- 58 years was assessed over a period of 20 days.

Results: A total number of 617 police personnel were examined in the study; out of which 32 (5%) were females and the rest 585(95%) were males. All the women police were married but 217 (37%) of men were not married.

Basic characteristics of the police personnel are depicted in Table 1. They were 40-58 years of age. Obesity was present in 43(7%) and overweight were 216(35%) (overweight and obesity 259 (42%).

Smoking was present in 136(22%) of them and the habit of alcohol consumption in 148(24%). Those who were not doing any sort of physical activity constituted 397(64%).

Morbidity profile of the police personnel is depicted in Table II. Overall prevalence of diabetes was 229(37%) and Hypertension was 203(33%) among the police personnel. Anemia was detected in 154 (25%), urine abnormalities were detected in 74(12%), lipid abnormalities in 185 (30%), liver function test abnormalities in 31(5%), and renal function test abnormalities in 6(1%). Cataract was detected in 2(0.6%) of the police, refraction errors in 57(9.4%) of the police. ECG abnormalities were detected in 25(4%) of the police. Fissure in ano was detected in 12(2%) of the police, hydrocele in 52(8%) and varicose veins in 18(3%). Heart diseases in 12(2%) of the police.

Table 1: Basic characteristics of the police personnel

Basic Characteristics	Police Personnel (n=617) N&(%)
Age in years (mean±1SD)	48.8±5.1
Body Mass Index	
Normal	358 (58%)
Overweight	216(35%)
Obese	43 (7%)
Smokers	13 (22%)
Alcohol consumption	148 (24%)
Leisure Time Physical Activity present	220(36%)

Table : 2 Morbidity of the police personnel

Disease	Police Personnel (n=617) No (%)
Diabetes	229 (37%)
Hypertension	203 (33%)
Lipid abnormalities	185 (30%)
Anemia	154 (25%)
Urine abnormalities	74 (12%)
Visual abnormalities	59 (10%)
Hydrocele	52 (8%)
Liver function test abnormalities	31 (5%)
ECG abnormalities	25 (4%)
Varicose veins	18 (3%)
Fissure in ano	12 (2%)
Heart diseases	12 (2%)
Renal function test abnormalities	6 (1%)

Discussion:The present study has shown that 203(33%) of the police personnel were hypertensive and 229 (37%) were diabetic, the prevalence of which is much higher than the general population. The government of India had launched the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases Stroke in 2010 to cover 100 districts in 21 states between 2010 and 2012. The screening of population aged 30 years and above and all pregnant mothers for early detection of suspected cases of diabetes and hypertension is part of the programme. The survey results in urban areas of the country, including Delhi, Bangalore, Chennai and Kolkata, have given disturbing trends of diabetes and hypertension with almost 15 per cent people suspected to be suffering from hypertension and 11 per cent from diabetes ¹¹.

The police personnel have to pass through various physical (athletic) tests and medical examination and only absolutely fit candidates are appointed as policemen. This suggests that the policemen join the police department in extremely good health with athletic physique but become unfit later on in service. Prevalence of overweight and obesity was seen in 259(42%) of the police personnel. The risk of many diseases including cardiovascular diseases, hypertension, hyperlipidemia, diabetes mellitus, and certain cancers increases many folds in association with obesity ¹²⁻¹⁶. The police personnel should be educated about avoiding fast food, juice, sweets, coffee and tea when they are hungry. Alternatives to fast foods such as energy bars, cheese and vegetable sandwiches should be encouraged, Green tea can replace tea and coffee, fresh fruits can replace sweets. Unknowingly the police may be consuming tea or coffee many times in a day to keep themselves alert, but they may not know that each cup of tea constitutes 75 Calories and coffee 110 Calories.

Anemia was seen in 154 (25%) of the police personnel which is very high. According to National Family Health Survey (NFHS -3) 24% of men and 56% of women aged 15- 49 years have anemia ¹¹. Anemia causes fatigue, decreased energy, weakness, shortness of breath, palpitations, decreases work capacity, decreases cognition and job performance. The Government of India should include the police into the national programme for prevention of anemia and supplement iron tablets. In the long run the diet of the police should improve with lots of green leafy vegetables every day.

This study revealed that 148(24%) of the police were consuming alcohol, which was much higher than the

general public. The different drug abuse surveys have shown the prevalence of alcoholism as 5- 20%. The short term effects of alcohol are slurred speech, drowsiness, vomiting, diarrhea, upset stomach, headaches, breathing difficulties, distorted vision and hearing, Impaired judgment, decreased perception and coordination, unconsciousness, anemia, coma, blackouts (memory lapses, where the drinker cannot remember events that occurred while under the influence). The Long-term effects of alcohol are unintentional injuries such as car crash, falls, burns, drowning. Intentional injuries such as firearm injuries, sexual assault, domestic violence become regular. Increased on-the-job injuries and loss of productivity, Increased family problems, broken relationship, alcohol poisoning, high blood pressure, stroke, and other heart-related diseases, liver disease, nerve damage, sexual problems, permanent damage to the brain, vitamin B₁ deficiency leading to a disorder characterized by amnesia, apathy and disorientation, ulcers, gastritis, malnutrition, cancer of the mouth and throat. Periodically the police should be made aware of these ill effects of alcohol so that no police would want to get hooked to alcohol. Smoking was present in 136(22%) of the police personnel. In India, there is The Cigarettes and Other Tobacco Products Act, 2003. Under this act, there is prohibition of advertisement and regulation of trade and commerce, production, supply and distribution and there is punishment for smoking in public places. If the law enforcement people themselves smoke then there won't be any fear among the general public and the law is diluted.

In the present study 59(10%) of the police were detected with visual abnormalities. Cataract was diagnosed in 0.6% of them and the rest of diseases like myopia and hypermetropia in about 9.4% of them. Good vision is the most important attributes for the police officers to have. Far visual acuity is the ability to clearly see objects and surroundings that are six feet or further away¹⁸. Excellent far visual acuity is absolutely necessary for a police officer. The inability of a police officer to distinguish whether an individual is holding a gun (or a non threatening object) in a variety of lighting conditions, can mean the difference of life or death for the officer as well as the individual holding the unknown object. Driving is a central function for a police officer and reading street signs and safely performing pursuit driving are also critical tasks for which good vision is vital. Near visual acuity is the ability to see clearly objects and fine detail at a distance of 36 inches or less. The police officer should be able to read a driver's license, or the penal code, or look at photographs of suspects. Peripheral vision is the ability to perceive objects, movement or sharp contrasts toward th

e edges of the visual field. Peripheral vision is also the ability to see these contrasts and gross movements while focused on an object towards the front of the visual field. Those tasks necessitating peripheral vision include, To see a car enter an intersection at a 4-way stop while the officer is driving through with emergency equipment flashing, As a group of males who spread out to left and right are approached, the officer should be able to look for sudden movements to ones own extreme left and right. To see movements off to the side while conducting a building search.

As a group, law enforcement officers have a greater morbidity and mortality rate than the public, mostly due to cardiovascular disease, colon cancer, and suicide. Recent studies have shown an annual increase in the frequency and severity of cardiovascular incidences among law enforcement personnel. The risk of having a heart attack doubles with each decade of law enforcement service.⁵ The police officers lead a physically inactive life, have irregular and spicy hotel made diet and limited choice of food while on duty, take overtime and shift work, suffer from sleeplessness, high rate of alcohols and tobacco consumption and stresses than the general people¹⁹. Police officers often are overly fatigued because of shift work, insufficient sleep and long and erratic work hours²⁰. In our study heart diseases were detected in 12(2%) of the police personnel, ECG abnormalities were detected in 25 (4%) and lipid abnormalities in 185(30%).

Police officers spend most of their working day in a standing or sedentary position, so they develop varicose veins. If the condition cannot be prevented or treated in a timely manner, varicose veins can lead to serious complications. Compression stockings is the best and most effective option to prevent and treat varicose veins. They should wear the stockings in the morning until bedtime. In our study varicose veins were detected in 18(3%) of the police personnel.

Individuals exposed to strain will cope with it in different ways, including delinquency and crime. If reaction to strain entails negative feelings, in particular anger or frustration, a deviant adaptation is more likely²¹. Forms of deviant adaptation include retaliation, escapism, and instrumental adaptation²¹. The general strain theory conceives of violence as a form of deviant adaptation toward pressure created by negative emotions.

The first conceptual approach involved conceiving of occupational stress as a process in which a negative state emerges when workers perceive a stressor as taxing, exceeding, or otherwise threatening their resources to cope effectively with it²². Depending on personality traits, the type of stress, and the

individual's coping resources, perceived stress might evoke maladaptive health responses, including psychological depression and burnout or behavioral responses²³.

Police officers need to receive inoculation training against stress. If they are told that if they see a dead body or an abused child or shoot at someone for the first time, it is common to have stress, they would be well prepared for these situations^{24,25}. Occupational stress, if untreated, can lead to negative changes in police officers, specifically in their self-schemas and in how they perceive the communities in which they serve. This, in turn, puts them at risk for becoming cynical, burning out, turning apathetic, divorcing, abusing alcohol and drugs, and committing suicide²⁶. Stress levels can be reduced by physical activity, relaxation techniques, good nutrition. According to Presidents council on physical fitness and Sports four pillars have been identified as vital for improving the health and fitness of Americans²⁷ 1) Being physically active everyday, 2) eating nutritious foods, 3) getting preventive screenings and 4)making healthy choices/ Avoid risky behaviors. The health consequences of a poor diet and physical inactivity can result in a chronic disease or health condition such as heart disease, high blood pressure, type 2 diabetes and various cancers including colon cancer, Stroke, Chronic pulmonary disease, anxiety, depression. The current study represents the findings of the police personnel under Vijayawada police commissionerate. Similar studies are warranted in the other parts of the country. Other people of the same age group working in different streams could not be compared. In spite of all these limitations the findings in this study point out that the prevalence of diabetes and hypertension is very high among the police and if not diagnosed early it would lead to many complications

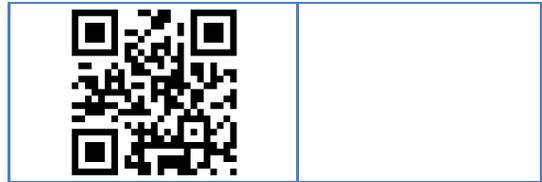
Conclusion: A police department has an obligation to recruit and maintain officers that are properly trained and physically capable of responding to the needs of all citizens. Implementation of a physical fitness programme, a regular balanced diet, inoculation training for managing stress can extend the career and improve the life of the officers. In addition the department will benefit in the public's eyes by producing more professional and impressive looking officers that will help the combat the negative stereotype of out of shape huffing, puffing bloated officer. It is the moral obligation of the Government of India to give them prompt and adequate health care. Health checkups should be made mandatory; so that self-indulgent habits and negligent behavior do not harm our law keepers. They look after the well-

being of the public so their well being also should be taken care.

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