Open Access
Original Article
Occupational Hazards
Pak Armed Forces Med J 2019; 69 (5): 1024-28

ASSESSMENT OF OCCUPATIONAL HAZARDS AMONG THE TRAFFIC POLICE OF RAWALPINDI & ISLAMABAD

Sana Bilal, Fazal Mehmood*, Masood Fazil*, Sidrah Nasim, Mehjabeen Qureshi, Muhammad Ashraf

Rawalpindi Medical University, Rawalpindi Pakistan, *HBS Medical and Dental College, Islamabad Pakistan

ABSTRACT

Objective: To determine the work related hazards faced by traffic policemen & utilization of safety measures by the traffic police during their duty hours.

Study Design: Cross-sectional study.

Place and Duration of Study: Traffic wardens of Rawalpindi & Islamabad were recruited for duration of 3 months, from Sep 2018 to Nov 2018.

Methodology: Consecutive sampling was done with inclusion criteria of age 25-50 years, non-asthmatic traffic wardens who had minimum two years of service. Those traffic police officers who were deputed for administrative work & not posted at traffic sites were excluded. Participants were interviewed using a structured, questionnaire and a checklist. Data was analyzed using the SPSS version 20.0.

Results: Among 82 traffic policemen 43 (53%) were having 6-8 hours of duty while 37 (46%) were serving as wardens for last 3-6 years. About 81% were wearing mask whereas 78% were using sunglasses during duty hours. Respiratory problems were acknowledged in 33 (41%) of participants as breathlessness followed by cough after joining the job. Redness of eyes & musculoskeletal cramps was observed in 33 (40%) & 41 (51%) of the individuals respectively. Most disturbing problem regarding their duty was long working hours 49 (60%) due to VIP movements.

Conclusion: Majority of traffic policemen were wearing masks & sunglasses during duty hours. A lot of them were facing respiratory hazards; breathlessness being the most common among them.

Keywords: Occupational hazards, Safety measures, Traffic wardens.

INTRODUCTION

WHO with the collaboration of International Labor Organization (ILO) has defined occupational health as, "the promotion and maintenance of the highest degree of physical, mental and social wellbeing of workers in all occupations; the prevention among workers of departures from health, controlling risks and adaptation of work to people and people to their jobs"[1]. Despite the availability of effective interventions to prevent occupational hazards and to promote health at the workplace, large gaps exist as far as the health status of workers and their exposure to job-related risks are concerned. Only a smaller proportion of the worldwide workforce has access to occupational health services[2].

In many countries, Work-Related Diseases (WRD) are either notdiagnosed or are not reported correctly. For this reason, in 2013, ILO declared occupational diseases as a "hidden epi-demic"[3]. GOHNET, (global occupational health network) a newsletter by WHO reported that in Latin American countries only 1-5% of the occupational diseases are reported. The probable number of non-fatal occupational diseases around the world should be around 160 million per year. However, in point of fact, only few of these cases are identified and reported correctly[4].

In Nepal, traffic police officers who work at busy intersections are at a highest risk of developing asthma or chronic bronchitis and musculoskeletal problems along with mental stress & anxiety[5]. In the city of Bari (Italy), a research was carried out in a population of traffic policemen depicting the long-term influence of

Correspondence: Dr Masood Fazil, Department of Community Medicine, HBS Medical and Dental College, Rawalpindi Pakistan
Email: masoodfazil58@gmail.com
Received: 11 Jan 2019; revised received: 11 Jun 2019; accepted: 25 Jun 2019

traffic pollution as airway inflammation and lung function[6].

A study conducted in traffic police constables in Islamabad showed that environmental lead pollution was connected with increased blood lead concentration in those who were exposed to vehicle exhaust in high traffic areas on a regular basis[7]. Pakistan, like many developing countries in the world, has no comprehensive Occupational Health & Safety (OHS) Laws. The shocking situation of OHS in the developing countries like Pakistan is due to a number of reasons, for instance, inadequate medical facilities, illiterate workforce and deficiency of reliable data about accidents[8].

In this study, it was intended to analyze the current situation of occupational health regarding traffic police and to stimulate discussions necessary to meet the challenges of occupational health in the modern working life as little has been done in our setup to assess their health status and suggest preventive measures for the alleviation of their health.

METHODOLOGY

A cross-sectional study was conducted in 82 traffic wardens of Rawalpindi & Islamabad in duration of three months from 01 September 2018 to 31 November 2018. Consecutive sampling was done with inclusion criteria of age 25-50 years, non-asthmatic traffic wardens who had minimum two years of service. Those traffic police officers who were deputed for administrative work & not posted at traffic sites, and thosetraffic police officers who had medical issues like respiratory, skin, musculoskeletal, ophthalmic problems before starting their job were excluded. Participants were interviewed using a structured questionnaire. Data collected was analyzed using the SPSS version 20.

Self-administered questionnaires were distributed to all the study respondents. The respondents were briefed about the purpose of the study beforehand and they were briefed on the details of the questionnaires. Fifteen to thirty minutes was allotted for each subject for filling the questionnaires. The respondents filled the questionnaire and questionnaire was instantly collected. Anonymity was ensured to the participants. Descriptive statistics were calculated for qualitative variables, frequencies and percentages were calculated.

RESULTS

Out of 82 traffic wardens, mean age of the study participants was 30 ± 10.6 years. Majority of the respondents 37 (46%) were serving the mentioned duty for about 3-6 years. Regarding the duty hours, 43 (53%) were on 6-8 hours of duty per day. Utilization of the safety equipment in the form of masks, gloves, traffic safety vest & sunglasses by the study participants has been shown in table-I. When they were enquired about the reason of not wearing sunglasses 61% considered that it was not required while mask was avoided by 38% wardens as they felt uncomfortable while wearing it.

Table-I: Utilization of personal protective equipment by traffic wardens.

Safety measures	Frequency	Percentage
Mask	66	81
Gloves	54	66
Sunglasses	63	78
Safety vest	57	70

Table-II: different morbidities detected.

Type of morbidity	Frequency	Percentage
Musculoskeletal disorders	41	50
Respiratory disorders	33	40
Gastrointestinal disorders	14	17
Allergic conjunctivitis/ Visual difficulties	33	40
Varicose veins	09	10
Hearing loss	05	6

Almost 73 (90%) of respondents complained that there was no facility of free medical treatment or any type of health insurance offered by the hiring organization. Among the different morbidity patterns studied in the traffic police

personnel, respiratory problems like breathlessness and cough was noticed in 33 (41%), musculoskeletal problems (cramps, backache) in 51%, ophthalmic problems (redness, watery eyes) in 40% whereas 6% were complaining of hearing loss. In 22 (28%) of traffic policemen, skin problems in the form of redness, itching, rash was seen (table-II).

illustrated in fig-1. Relationship between wearing of sunglasses and ophthalmic problems of traffic policemen was depicted in fig 2.

DISCUSSION

In this study, half of the traffic constables have muscle cramps which was also observed in a research carried out in India where 28% of the study population was having musculoskeletal

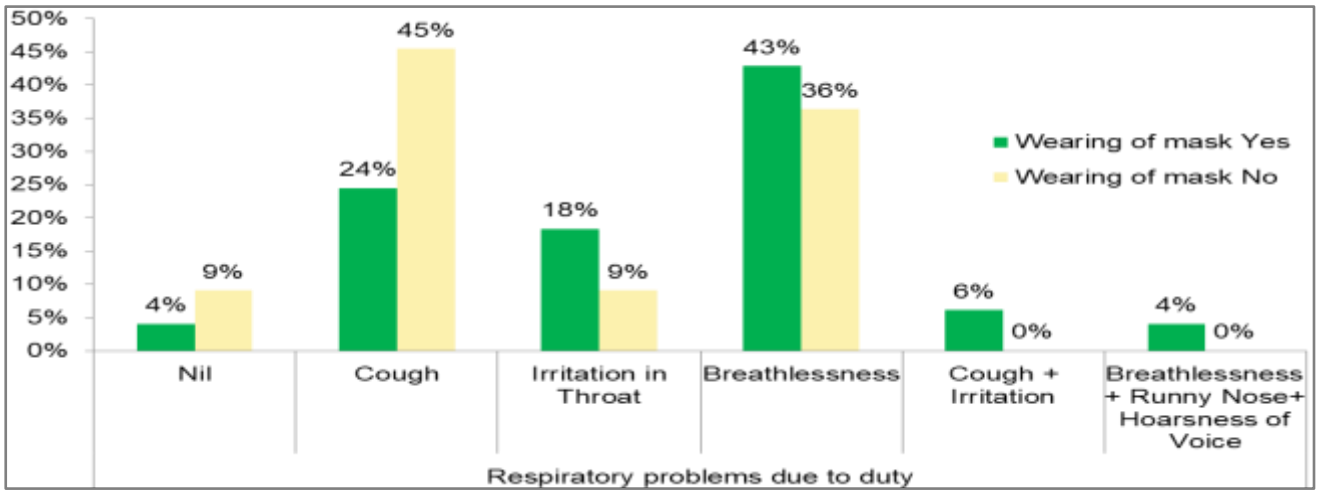

Figure-1: Relationship between wearing of masks and respiratory problems.

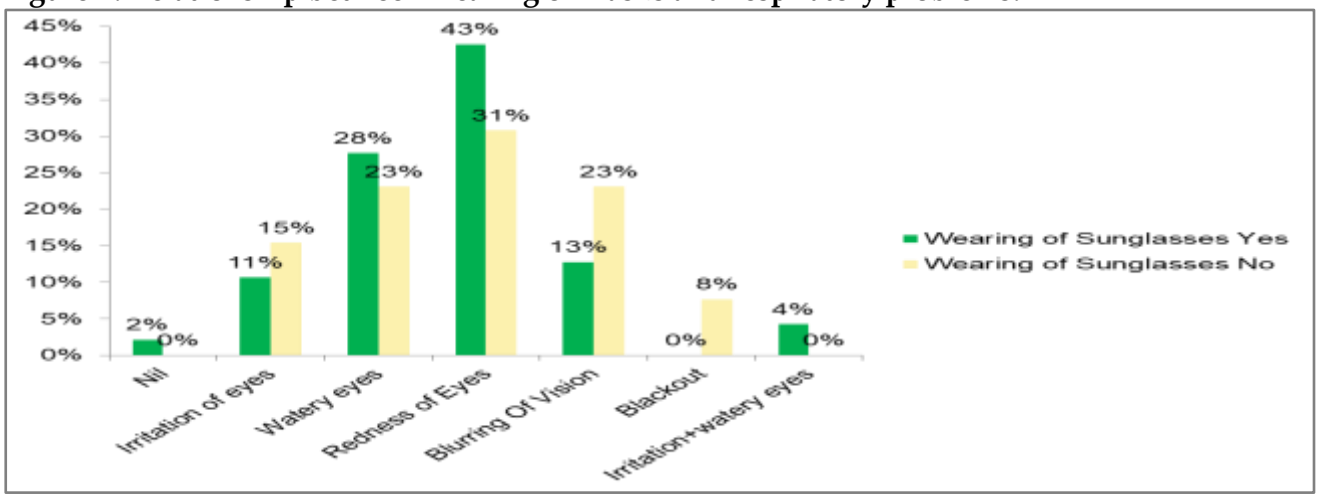

Figure-2: Relationship between wearing of sunglasses and ophthalmic problems.

Though majority 36 (45%) was having sleep duration of 6-8 hours but still 73 (90%) were complaining of disturbed sleep. Long duty hours due to frequent VIP movements as well as protocol duties were the biggest complaint by 60% of the traffic policemen (n=49). Relationship between wearing of masks and respiratory problems confronted by the traffic wardens was

problems[11]. Another national study showed that most of the physio-psychological effects augmented as the exposure time became greater than before including muscle tension, low performance levels & concentration loss[12]. A hygienic appraisal of occupational dynamics which categorized the working conditions of traffic policemen was performed in Russia where

authors revealed a prominent role of the following diseases: musculoskeletal diseases, diseases of connective tissue, digestive diseases, diseases of the nerve system, circulation system; their share in the morbidity structure was 86.0%. The association of these diseases with job was confirmed by the increasing of their incidence with increasing of length of time of service[13]. The most understandable reason of Similar physiological deterioration seen in above mentioned studies seems to be because of same environment and traffic conditions faced by the respondents. Experience to road traffic noise is an imperative environmental problem that may cause menacing effects in public[14] likewise revealed in our research work where 6% policemen have hearing problems. Consistent to it, a study conducted among Traffic Police Personnel of Kathmandu Metropolitan City depicted that noise induced hearing loss was common among them[15]. This might be due to long working hours (>8 hrs/day) of Nepalian traffic police. While evaluating the auditory pathway of these personnel it was identified that prolonged exposure of traffic policemen to noise caused delayed conduction in peripheral part of the auditory pathway, ie, auditory nerve up to the level of superior olivary nucleus[16].

Most of the respondents (90%) of our study were suffering from distressed sleep. This was in line with another study in South Korea, where traffic police and fire fighters were at significantly higher risk for stress disorders (HR: 1.40, 95% CI 1.26 to 1.56) than other public officers[17]. Comparable consequences were perceived in Tehran where nervousness, sleep quality & depression were the foremost health effects caused by the noise[14]. This result may be because of tiring working hours in an environment full of noise and pollution.

Although traffic police force is entitled for free medical treatment & health insurance in case of disability/death by the organization, most of the respondents (98%) said that there was no such provision. This controversy can be either due to lack of awareness about health facilities or they might be hiding the facts.

About 28% of traffic constables in our study complained of redness of skin, which was concurrent to a study conducted in China, where traffic police had more skin problems than administration staffs in exposed parts of body[18]. In addition, our outcomes were in agreement with the conclusions of Proietti *et al*., who observed a greater prevalence of respiratory symptoms and allergic sensitization in a group of traffic policemen exposed to pollutants[7]. In this study, most of the respondents not wearing mask were having problem of cough which was parallel to another study carried out in Thonburi district of Bangkok showing that traffic policemen suffered significantly more cough (18.6% vs. 7.8%) than normal Thai population[19]. Reducing the health risks associated with these environmental hazards involves partnerships between ministries of health and ministries responsible for environment, transportation, and public works. Decline of occupational threats is considered the obligation of establishments and employees equally, but it is often supervised and planned by ministries in authority for labor[20].

CONCLUSION

Though most of traffic police were wearing personal protective equipment, a lot of them were facing respiratory hazards; breathlessness being the most common among them. They were also confronting the difficulties of cramps and distressed sleep.

CONFLICT OF INTEREST

This study has no conflict of interest to be declared by any authors.

REFERENCES

1. World Health Organization. Occupational Health [online] cited 2018 dec 22. Available from: https://www.who.int/topics/occupational_health/en/
2. Sixtieth World Health Assembly. Workers' health: global plan of action [Internet] 23 May 2007. availabe from: http://www.who.int/occupational_health/WHO_health_assembly_en_web.pdf? ua=1.
3. The Prevention Of Occupational Diseases [Internet] Switzerland published by ILO 28 April 2013. available from: http://

www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/-safework/ documents/publication/wcms_208226.pdf
4. Improving Workers' Health Worldwide [Internet] WHO publications November 2013. http://www.who.int/occupational_health/publications/newsletter/GOHNET_Newsletter22_Nov2013.pdf?ua=1
5. Patil RR, Chetlapally SK. Global review of studies on traffic police with special focus on environmental health effects. Int J Occup Med Environ Health 2014; 27(4): 523-35.
6. Neopane DA, Occupational hazards for traffic police officers. The kathmandupost [Daily edition] 2012 Mar 12.
7. Vimercati L, Gatti M, Baldassarre A, Nettis E, Favia N, Palma M. Occupational Exposure to Urban Air Pollution and Allergic Diseases. Int J Environ Res Public Health 2015; 12(10): 12977-87.
8. Choudhary H; TarloSM .Airway effects of traffic-related air pollution on outdoor workers. Curr Opin Allergy ClinImmuno 2014; 14(2): 106–12.
9. Agha F, Sadaruddin A, Khatoon N . Effects of environmental lead pollution on blood levels in traffic police constables in Islamabad. J Pak Med Assoc 2005; 55(10): 410-3.
10. Rahman Z, Ambreen N , Khan T, Khan A. Status of Occupational Health and Safety in Brick Kiln Industries at Hatter Industrial Estate Haripur, Pakistan. J Environ 2012; 1(2): 56-63.
11. DM Satapathy, TR Behera, and RM Tripathy. Health Status of Traffic Police Personnel in Brahmapur City. India J Community Med 2009; 34(1): 71-72.
12. Tabraiz S, Ahmad S, Shehzadi I, Asif MB. Study of physio-psychological effects on traffic wardens due to traffic noise pollution; exposure-effect relation. J Environ Health Sci Engin 2015; 13(1): 30-37.
13. Fedotova IV, Chernikova EF. Stress as an occupational risk factor among policemen of road patrol service. Gig Sanit 2016; 95(7): 617-22.
14. Geravandi S, Takdastan A, Zallaghi E. Noise Pollution and Health Effects. Jundishapur J Health Sci 2015; 7(1): e25357.
15. Shrestha I, Shrestha BL, Pokharel M, Amatya RCM, Karki DR. Prevalnace of Noise Induced Hearing Loss among Traffic Police Personnel of Kathmandu Metropolitan City. Kathmandu Univ Med J 2011; 36(4): 274-8.
16. Indora V, Khaliq F, Vaney N. Evaluation of the Auditory Pathway in Traffic Policemen. Int J Occup Environ Med 2017; 8(2): 109-116.
17. Han M, Park S, Park JH. Do police officers and firefighters have a higher risk of disease than other public officers? A 13-year nationwide cohort study in South Korea. BMJ Open 2018; 8(1): e019987.
18. Yan YH, Wu JB, Wang XG, Sun J, Yuan CR, Cheng YL. Investigation on occupational hazards of ultraviolet light, sunscreen awareness and behaviors in Wuhan city traffic police 2010; 28(11): 831-4.
19. Wongsuraki P, Maranetra KN, Nana A, Naruman C, Aksornint M. Respiratory and pulmonary functions of traffic policemen in Thonburi. J Med Assoc Thailand 1999; 82(5): 435-43.
20. Watkins DA, Dabestani N, Nugent R, Levin C.Interventions to Prevent Injuries and Reduce Environmental and Occupational Hazards: A Review of Economic Evaluations from Low- and Middle-Income Countries. Injury Prevention and Environmental Health. 3rd edition. Washington (DC): The International Bank for Reconstruction and Development / The World Bank; 2017 Oct. Chapter 10.

.....