REVIEW ARTICLE

WORK PLACE DESIGN REFORMS FOR TRAFFIC POLICE

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ARTICLE INFO	ABSTRACT
	The police are the law enforcement personnel. They deal on a regular basis with a variety of unique situations and stressors. 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. 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. Good work place can extend the career and improve the life of the officers. It is the moral obligation of the Government of India to give them ideal work environment. They look after the well-being of the public so their well-being also should be taken care. In this article we recommended workplace design reforms which can improve occupational health of police so that the policing can be referred as less stressful and less complicated service in India.

INTRODUCTION

To understand the police, it is important to discuss a few important *characteristics of the* criminal justice system. The police is a state subject and its organization and working are governed by rules and regulations framed by the state governments. These rules and regulations are outlined in the Police Manuals of the state police forces. The police station is the basic unit of police administration in a district. A police station is divided into a number of beats, which are assigned to constables for patrolling, surveillance, collection of intelligence etc. The officer in charge of a police station is an Inspector of Police, particularly in cities and metropolitan areas (Chenthilkumar, CHRI). The NPC's (National Police Commission: Eight Report, Police Bill, Section 43), Model Police Bill prescribes duties to the police officers. However it doesn't mention minimum essential working environment attributes to protect their occupational wellbeing. Police is a profession which involves time pressure, long hour duties, work-shifts, courtroom appearances, working with civilians, political interference, insufficient staff, absence of technical aids, lack of co-operation and constant criticism by the media, public and the others. Various reforms and recommendations have been made by different committees and commissions set by government of India from time to time (Gurpreet *et al.,* 2013).

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However, most of these reforms were proved to be inadequate. Author has conducted studies in Navi Mumbai Commissioner ate on Traffic Police to determine their occupational health. Study results confirms obesity prevalence (Shweta and Hasmeet *et al.,* 2014), reduction in flexibility and endurance (Shweta and Sumaiya *et al.,* 2014). Screening with help of Nordic Musculoskeletal Questionnaire for occupation related musculoskeletal pain, showed presence of work related low back pain (Shweta and Rajak *et al.,* 2015)

Psychosocial environment assessed with help of Copenheagan psychosocial questionnaire (COPSOQ) medium version reveals behavioral stress and quantitative demand at work place (Shweta and Priyanka *et al.,* 2014)

Self-perceived quality of life assessed using world health organization quality of life BREF questionnaire (WHOQOL-BREF) disclosed their dissatisfaction about their physical environment in most affected environmental domain. (Shweta and Anurag *et al.,* 2014)

Review of literature confirms similar findings in other part of India. Jahnvi *et al.,* in 2012, Assessed 617 police personnel in Vijayawada commissioner ate. Their results showed (42%) were overweight/obese, lack of physical activity was found in (64%) of them, alcohol consumption was present in (24%) and smoking in (22%) of the police personnel. Diabetes was diagnosed in (37%) and hypertension in (33%). Anemia was detected in (25%), visual abnormalities in (10%), lipid

abnormalities in (30%), liver function test abnormalities in (5%), ECG abnormalities in (4%), renal function abnormalities in (1%). Tharkar *et al.,* in 2008 confirms high prevalence of metabolic syndrome and cardiovascular risk among police personnel compared to general population in India. In this paper we have put forth workplace design framework for the traffic police department to keep police personnel physically and mentally fit, to perform critical job functions, to alleviate stress, and to improve their quality of life. If department adopt this reforms, the department will benefit in the public's eyes by producing more professional officers that will help to combat the negative stereotype of out of shape huffing, puffing bloated officers.

Ideal Workplace

Physical work environment plays an important role and has a dominant influence on cognitive processes of employee. A first approach can therefore consist in changing aspects of the physical environment such as the arrangement of workplaces. Future developments should, however, also provide greater support for collaborative workflows. Fundamental design elements can positively impact the workplace environment and support the work being done.

Let's discuss few elements

Thermal Comfort and Temperature

Thermal comfort can be created through the right combination of temperature, airflow and humidity. A combination of these elements is required for physical comfort in the workplace. The ideal temperature in office environments is 70.88 degrees Fahrenheit (21.6 degrees Celsius). Tanabe *et al.,* 2007 concluded that 1-2 percent decrease in performance for every 1.8° F (1° C) above or below. However Witterseh *et al.,* (2004) stated that slightly lower temperatures are associated with higher accuracy on simulated tasks and reduced sick leave.

Suggested reforms–Accordance to Navi Mumbai weather provision of air conditioning system will help to great extent. Provide operable windows or operable window coverings to maximize sunlight, airflow and temperature control.

Access to Nature, Views and Daylight

People generally prefer to be surrounded by nature, which provides endless sources of variation and sensory change. The instinctive bond between humans and other living systems, often called biophilia, is important to replicate in interior environments.

*Suggested reforms***:** The floor plate can be Organize to maximize natural light penetration onto the floor. Glass use maximized where visual privacy is not required.

Sensory Change and Variability

Heerwagen *et al.* (2000), suggested Sensory change and variability like Change in lighting levels and use of highlights, and moderate levels of visual complexity affect workforce positively.

*Suggested reforms***:** "texture" can be introduced into an office by using natural materials such as wood, cork, plants, and natural fibers.

Color

Strategic use of color can promote desired behaviors and feelings. Color use can vary through the workplace. It can be used as a design technique to identify circulation or the changing character of space.

Suggested reforms

As per Kwallek (2006) brighter colors (reds, as well as blues and greens) are associated with higher focus and task accuracy. Blue is calming and cooling, promoting mental control and clear, creative thinking. Pink lessens feelings of irritation, aggression, loneliness, discouragement and burden. Red enhances feelings of strength and energy; it is associated with vitality and ambition. Yellow makes people feel clear-headed and alert, allowing for clear thinking for decision making. Orange helps ease emotions and boost self-esteem. It creates enthusiasm for life. Thus selection of colours in office will help to enhance positivity.

Noise Control

The U.S. General Services Administration published a comprehensive guide to acoustics in the workplace (2011). In it, they state, "Office acoustics is a key contributor to work performance and well-being in the workplace. The ability to find quiet times and places are essential to support complex knowledge work, while the ability to have planned or spontaneous interactions without disturbing others is necessary for team work and relationship development. Having speech privacy is necessary for confidential interactions and work processes. 'Acoustical comfort' is achieved when the workplace provides appropriate acoustical support for interaction, confidentiality and concentrative work."

Suggested reforms

Designers recommend three strategies for achieving a non-intrusive level of speech privacy. They include absorption (through acoustical ceiling, fabrics and carpet), blocking (through furniture system, panels, walls, partitions and screens, and covering (sound masking). To achieve the desired result, all three strategies must be integrated. Try to separate energetic, centralized and noisy spaces from quiet areas. Create opportunities for people to come together without disturbing colleagues.

Crowding: When people feel crowded they often feel stressed, which influences their satisfaction of the workplace. The perception of space and whether a person feels crowded varies greatly by cultural background, individual preferences and gender.

*Suggested reforms***:** Orient individual workspace openings such as workstation openings or desk positions in an office to minimize views into others' workstations while seated. When possible, provide views to windows to reduce perception of crowding.

Last but not list as per Human Factors and Ergonomics provision of adjustable furniture such as adjustable chairs, task lights, sit-to-stand desks and keyboard trays, so individuals can adjust their workspaces to meet their needs. Using above mention strategies for workplace design along with work-side health promotion enhance performance of Traffic Police Personnel.

REFERENCES

Chenthilkumar Paramasivam, Police organization in India, CHRI, Commonwealth Human Rights Initiative, E-mail: chriall@nda.vsnl.net.in, Website: http://www.humanrightsinitiative.org

Gurpreet Randhawa and Ms. Komal Narang, Police in India: Reforms and Employment Status, *Indian police journal*, July-September, 2013, Vol. LX, no. 3.

Shweta S. Devare Phadke, H Sandhu, RaufIqbal, S Yardi, 2014. Prevalence of obesity in Navi -Mumbai Traffic Police and associated change in lumbar curvature angle, *Journal of International Academic Research for Multidisciplinary*, 2 (3), 566-574.

Shweta S. Devare Phadke, Sumaiya A. Khan, RaufIqbal, Ramkrishna. K. S. 2014. Assessment of Endurance, Power & Flexibility of Navi Mumbai Traffic Police, *International Journal of medical and pharmaceutical Sciences*, 2014, 4 (11), 20-25.

ShwetaS.DevarePhadke, RajakRevati, RaufIqbal, 2015. Work related Musculoskeletal symptoms among Traffic Police: Cross sectional survey using Nordic Musculoskeletal Qestionnaire, *International Journal of Recent Research in Interdisciplinary Sciences (IJRRIS)*, vol.2, issue 2, 26-29.

Shweta, S. Devare Phadke, Priyanka Patra, RaufIqbal, 2014. Psychosocial Problems in Traffic Police: Cross Sectional Survey Using COPSOQ, *Scholars Journal of Applied Medical Sciences* (SJAMS), 2 (6G), 3380-3382.

Shweta, S. Devare Phadke, Anurag Gupta, RaufIqbal, 2014. Application of WHOQOL- BREF in measuring Quality of Life in Traffic Police*, International Journal of Science and Research*, 3 (6), 1580-1583.

Jahnavi, G., *et al.* 2012. Unmasking the health problems faced by the police personnel, GJMEDPH, Vol. 1(5) September-October, 64 – 69)

Tharkar, S., Kumpatla, S., Muthukumaran, P., Viswanathan, V. 2008. High prevalence of metabolic syndrome and cardiovascular risk among police personnel compared to general population in India. *J Assoc Physicians* India, 56:845–849.

Tanabe, S., Nishihara, N., and Haneda, M. 2007. "Indoor temperature, productivity, and fatigue in office tasks," HVAC&R Research, 13(4), 623-633.

Witterseh, T., Wyon, D., and Clausen, G. 2004. "The effects of moderate heat stress and open-plan office noise distraction on SBS symptoms and on the performance of office work". Indoor Air, 14 (Suppl 8), 30-40.

Heerwagen, Judith H., Ph.D., "Green Buildings, Organizational Success, and Occupant Productivity," Building Research and Information, Vol. 28 (5), 2000:353-367.

U.S. General Services Administration, "Sound Matters: How to Achieve Acoustic Comfort in the Contemporary Office", GSA Public Buildings Service, December 2011.

http://www.hok.com/thought-leadership/workplace-strategies-that-enhance-human-performance-health-and-wellness/Accessed on 20-12-15.

Kwallek, N., Soon, K., and Lewis, C. M. 2006. "Work week productivity, visual complexity, and individual environmental sensitivity in three offices of different color interiors". Color Research and Application, 32(2), 130-143.

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