Prevalence of Physical Health Symptoms in Police Officers

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Abstract. This study reports on the prevalence of physical health symptoms in Jamaican police officers (N=134) and examines associations between these and gender, age, rank and years of service. The relationships between number of reported symptoms and sickness and doctor visits were also examined. Participants completed a questionnaire using a cross-sectional design. Over 50% of participants reported backache, frequent headaches, heartburn or indigestion, and sleeping problems. Few significant relationships were found with demographic variables and symptoms. Significant relationships between number of symptoms, sickness absence and doctor visits were observed. Implications of the findings and suggestions for future studies are discussed.

Keywords. Physical health symptoms, psycho-social stress, ergonomic risk, police officers

1. Introduction

Police officers are exposed to a number of occupational hazards that make them a high risk group for various health related concerns. Some aspects of policing make police officers especially susceptible to physical health symptoms because of the ergonomic and physical risks involved, while other symptoms might be due to psycho-social hazards. Ergonomic and physical risk factors such as prolonged exposure to sitting while driving, riding motorcycles, standing while on duty, and wearing body armour are shown to be associated with lower back problems. Burton, Tillotson, Symonds, Burke and Mathewson (1996) studied two police forces in the United Kingdom (UK) and found that exposure to wearing body armour and being exposed to vehicle vibrations for over two hours a day was associated with increased risk for lower back pain. In another study in the UK, police officers whose job involved mainly driving were found to experience lower back problems compared to officers whose job did not include driving (Gyi and Porter, 1998). The researchers also found that police motorcyclists were at increased risk for shoulder trouble compared to officers who drove all day in cars. Police officers are also exposed to psychosocial risk factors in their job. Policing is considered a highly stressful occupation and unrelenting stress may have not only psychological effects but may also manifest as physical symptoms. Physical symptoms of stress, sometimes referred to as psychosomatic symptoms, can take many forms including headaches, tenseness or fidgetiness, backaches, stomach aches, and sleep problems. While research on the effect of occupational stress on physical symptoms in police officers is limited, existing studies have shown that stressors are associated with psychosomatic symptoms and increases police officers' risks to more serious physical disease such as cardiovascular disease and musculoskeletal problems (Cheuh, Yen, Lu, and Yang, 2011; Franke, Collins & Hinz; 1998, Ramey, Downing & Franke, 2009). Gershon, Barocas, Canton, Li, and Vlahiv (2009) studied police officers in the United States of America (USA) and showed significant associations between perceived job stress and adverse physical health outcomes including chronic back pain, foot problems, migraine and chronic insomnia with prevalence rates of these symptoms of 15 to 35 percent.

Similarly, Cheuh, et al. (2011) studied Taiwanese police officers and found that high levels of perceived job stress were associated with a total psychosomatic symptoms score which included symptoms such as feeling tired and exhausted, shortness of breath, dizziness, and muscle trembling. In another study, Anderson, Litzenberger, and Plecas, (2002) sought to examine on-the-job physical and psycho-social stress reactions. Data were collected from police officers in the USA through 76 full shift ride-alongs. Findings demonstrated that police officers experienced both physical and psycho-social stress on the job. Police officers highest physical stress occurred when they were involved in situations that required pushing, pulling and fighting. Psycho-social stress reactions were observed during high demand and low control situations such as interacting with a suspect.

These studies provide some evidence that various aspects of police work may increase the risk of physical symptom complaints in police officers. Prolonged exposure to various occupational hazards can cause wear and tear on the body that can have deleterious effects on physical health over the long term. Early signs of physical health issues can be a precursor to more severe health concerns in the future. In the short term, the experience of physical symptoms may result in decreased job performance, sickness absences and increased healthcare costs. Therefore the primary aim of this paper is to examine the prevalence of physical symptoms among a group of Jamaican police officers. A secondary aim is to examine relationships between number of reported symptoms and sickness absence and doctor visits.

2. Method

The sample consisted of police officers between constable and inspector ranks who were serving in the Jamaican police force (N=134). The study survey included demographic and occupational characteristics variables: gender, age, rank, years of service, relationship status, and level of education. Continuous variables (age and years of service) were categorised for analysis. Seventy-nine percent of participants were male and the average age was 32 years. Forty-four percent were 29 years old and under, 35 percent were between 30-35 years, and 21 percent were 36 years and older. Most participants were constables (48%), 19 percent were corporals and about a third were either sergeants or Inspectors (33%). Forty-four percent of the sample had been serving in the police force for five years or less, 34 percent had six-12 years of service and 22 percent were serving for 13 or more years. Just over half the participants (51%) had some form of tertiary level education, with the rest having completed at least up to secondary level. Most of the sample (56%) reported that they were in a relationship, 23 percent were single, 18 percent married and three percent were either separated or divorced. Gender, age, rank and years of service were the variables observed in this study.

Physical health symptoms were measured by asking participants to indicate whether or not they had experienced a list of physical symptoms over a 12 month period. An overall physical health symptoms score was computed for each participant and subsequently categorised into groups based on number of symptoms experienced. Questionnaires were administered to officers who were attending developmental training courses. The researcher contacted the training coordinators and was allowed to administer the questionnaire prior to the start of classes. The study was approved by the Ethics Committee of the School of Psychology, Cardiff University and permission was obtained from the Commissioner of Police to conduct the study.

3. Results

Prevalence of physical symptoms is shown in table 2. The most prevalent symptom reported by police officers was backache (67%). Fifty percent or more of participants reported that they experience frequent headaches (59%), heart burn or indigestion (51%), and sleeping problems (50%). Forty-eight percent reported stomach pains and changes in metabolism. The least reported symptoms were nausea and vomiting (19%), difficulty breathing (21%), and high blood pressure (23%). Overall, 41percent of police officers reported having less than five symptoms, 40 percent had between 5-9 symptoms and 19 percent reported 10 or more symptoms. Thirty-one percent of officers reported visiting the doctor four of more times for the year, just over 50 percent (52%) visited the doctor one to three times, and 16% said they did not visit the doctor over this period. Thirty-six percent of participants reported taking four or more days sick leave over the 12 month period, 31 percent took one to three days and 33 percent reported no sickness absence days.

	No	Yes
Symptom	n (%)	n (%)
Frequent headaches	55 (41)	78 (59)
Diarrhoea	84 (64)	47 (36)
Heartburn or indigestion	65 (49)	67 (51)
Difficulty breathing	104 (79)	27 (21)
Dizziness or giddiness	79 (61)	51 (39)
Stomach pains	68 (52)	63 (48)
Nervy, tense, trembling	88 (68)	42 (32)
Difficulty sleeping	65 (50)	65 (50)
Pain the chest	43 (65)	46 (35)
Backache or pains in the back	43 (33)	88 (67)
Constipation	91 (69.5)	40 (30.5)
Chronic fatigue	82 (63)	48 (37)
Nausea and vomiting	104 (81)	25 (19)
High blood pressure	100 (77)	30 (23)
Changes in metabolism	66 (52)	62 (48)

Table 1. Prevalence of physical health symptoms in the sample.

Chi-square analyses were used to test significant relationships between demographic and occupational variables and physical health symptoms. Police officers who experienced frequent headaches were more likely to be female (χ^2 (1, n=125) =18.08, p < .01) and age 29 years or below (χ^2 (2, n=114) = 10.85, p < .01). Those who reported dizziness/giddiness were also more likely to be female (χ^2 (1, n=124) =12.12, p < .01). Officers who reported that they experienced stomach aches (χ^2 (2, n=126) =8.98, p < .01) and chronic fatigue (χ^2 (2, n=125) = 6.83, p < .05) were more likely to be constables and those who experienced breathing problems were more likely to be in the police force for 13 or more years (χ^2 (2, n=116) = 7.74, p < .05). Chi-square tests also revealed a significant association between gender and the total number of symptoms reported by participants. Half of male officers reported four of less symptoms, 33 percent reported five to nine symptoms and 17 percent had 10 or more symptoms. A quarter of female officers reported four or less symptoms and 10 or more symptoms each, with 50 percent reportedly having five to nine symptoms (χ^2 (2, n=118) = 7.06, p < .05). The study also examined whether there was a relationship between total number of physical symptoms, sickness absence from work, and doctor visits over a 12 month period. Chi-square analyses showed that police officers who reported five to nine symptoms and 10 or more symptoms were more likely to be absent from work for more days, while those who reported four or less symptoms had fewer sick days (χ^2 (4, n=119) = 14.99, p < .01). Similarly, police officers who had 5-9 symptoms and 10 or more symptoms reported more doctor visits. Of those officers who had four or less symptoms, 10 percent went to the doctor four or more times, 59 percent one to three times and 31 percent had no doctor visits. (χ^2 (4, n=118) = 23.18, p < .01).

4. Discussion and Conclusion

The results of this study are similar to other studies that have shown back pain to be prevalent among police officers (Burton et al., 1996; Gershon et al. 2009; Gyi and Porter, 1998). Previous studies show that lower back pain in police officers is due to the design and physical requirements of the job. Back pain has been associated with prolonged periods of driving, standing, and wearing body armour and duty belts (Burton et al., 1996; Gyi and Porter, 1998), but can also be related to psycho-social stressors (Gershon et al., 2009). Current findings also show that at least 50 percent or more of this sample of police officers report frequent headaches, heartburn or indigestion, and sleep problems. These are higher rates compared to at least one study on police officers in the USA which showed prevalence rates for migraines and chronic insomnia to be 20 and 15 percent respectively (Gershon et al. 2009). It is possible that some physical symptoms, such as back pains are more related to ergonomic risk factors while psychosocial stressors influence others such as headaches, and sleep problems. Future studies can explore the distinctive and combined effects of the cause of these symptoms. The literature on how police work affect police officers based on demographic and occupational characteristics is mixed. This study found few significant associations between gender, age, rank, years of service and independent physical health symptoms. However, frequent headaches and dizziness/giddiness were more likely reported by females and being a female officer was associated with having more symptoms overall. This suggests that female police officers are more likely to have physical reactions to adverse occupational hazards. Generally, having more physical health symptoms were associated with more doctor visits and officers taking more days off due to sickness. This finding highlights not only the negative consequences to the police officer in experiencing poor health and having the financial burden of increased healthcare cost but also the lost to the police organisation in the form of possible lower performance levels and hours of work lost.

This study is limited in that it does not compare the prevalence of symptoms to other occupational groups or general population to estimate whether prevalence are disproportionately high among police officers. However, it provides some consistent evidence that police officers are susceptible to adverse physical health symptoms. Future research should focus on more comparative studies, examining the specific cause of these symptoms, and possible interventions to alleviate them.

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