

FREQUENCY OF LOWER BACK PAIN AMONG THE PRIVATE SECURITY GUARDS

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ORIGINAL ARTICLE

ABSTRACT

Background: Low back pain can result in severe and long-term impairment. The nature of the job, which often involves long hours of standing, walking, or lifting, causes strain on the lower back among security guards. Approximating the occurrence of lower back pain is challenging, as its incidence continues to rise, particularly in early adulthood. **Objective:** To evaluate the incidence of lower backache among private security guards in Lahore, Pakistan. **Methods:** A Cross-sectional survey was conducted from March 2017 to August 2017 after approval of synopsis. Data was collected from 124 security guards in Lahore by using Oswestry questionnaire for disability and visual analogue scale (VAS) for pain. **Results:** The frequency of lower back pain among security guards was 77 (62.1 %). 52.4% (65 individuals) reported not experiencing pain at the moment, while 47.6% (59 individuals) reported feeling pain at the time of survey. 33.9% (42 individuals) reported having no pain at the moment, while 22.6% (28 individuals) described their pain as very mild. 29.0% (36 individuals) experienced moderate pain, and 14.5% (18 individuals) reported their pain as fairly severe. **Conclusion:** Low back pain significantly affects the majority of security guards who took part in this study. The findings suggest that back pain is a major cause of disability, impacting the ability to sit, stand, and lift comfortably. This condition not only affects daily work performance but also has broader implications for the well-being and productivity of security personnel. Given the high prevalence of back pain in this profession, it is crucial to implement preventive measures and provide support to reduce its occurrence and improve overall health outcomes for security guards.

INTRODUCTION

Chronic low back pain can lead to severe and long-term impairment¹. The Worldwide Load of Illness Study listed lower backache as a main reason of inability amongst musculoskeletal conditions and graded minor backache in the top 5 conditions contributing to loss of disability-adjusted life years.² Discomfort caused by physical inactivity has raised significant concerns in Western societies. Sedentary behavior is linked to various chronic illnesses,

with lower back pain being one of the most prevalent and major contributing factors.³ In 1998, nearly 17.4 billion Euros annually of the overall budget were used on the management of lower backache⁴.

A significant issue affecting many people is discomfort in the lower spine, which is often not accurately diagnosed as lower back pain.⁵ It's not surprising that preventing lower back pain has become a crucial area of research for overall health.⁶ It is estimated that by the age of 20, about 50% of individuals have experienced lower back pain at least once.⁷ Injury from misuse is a major concern, particularly during leisure activities, sports, and for security personnel involved in physically demanding tasks.^{8,9} Danielle L. Sche and colleagues conducted research on the incidence of joint hypermobility among security forces, finding that out of 13,779,234 individuals, 790 were diagnosed with joint hypermobility, indicating a rare occurrence rate of 0.06 per 1,000 people annually.¹⁰

Fajardo Rodriguez et al. explored the prevalence of lower back pain in the security sector, using a chronic pain scale and finding that 65% of individuals experienced chronic pain, with factors such as time spent on the job and physical workload being key contributors.¹¹ Ville M. Mattila and his team examined the frequency of lower back pain in hospital security staff, reporting a hospitalization rate of 27%, with a 95% confidence interval between 25.7% and 28.2%.¹² Roy Tanja C. et al. studied the impact of military deployment in Afghanistan, finding that 22% of 800 public service personnel experienced moderate or severe lower back pain.¹³ Lastly, Brian R. Waterman and his colleagues found that in the U.S., an estimated 1.48 billion people annually experience lower back pain, with an incidence rate of 1.39 per 1,000 people, most commonly occurring in individuals between the ages of 25 and 29.¹⁴

The rationale for researching lower back pain, particularly among security personnel, lies in its widespread impact on health, productivity, and quality of life. Security personnel are particularly at risk due to the physically demanding nature of their work, including long hours of standing, lifting, and responding to emergencies. The current study aims to assess the incidence of lower back pain among private security guards in Lahore. By investigating these aspects, researchers can develop targeted interventions and ergonomic solutions to mitigate the risk of LBP and improve outcomes for individuals in high-risk professions.

MATERIAL AND METHOD

Study design: Cross – sectional study design was used.

Settings: Data was collected from security guards in Lahore.

Study duration: Five months (March 2017 to July 2017) after approval of synopsis from ethical committee of the University of Lahore.

Sample size: 124 on duty security guards.

Sampling technique: Non-probability convenient sampling.

Sample selection criteria:

Inclusion criteria:

1. Male gender
2. On duty security guards.
3. Age ranges from 24 to 65 years

Exclusion criteria:

1. Non-Security Personnel
2. History of Cancer.
3. Preexisting severe medical conditions
4. Acute or recent injury
5. Mental health issues

Data collection instruments:

After taking an informed consent, this study was done. Their demographic variable like age, contact details and clinical assessment was done. Oswestry questionnaire for disability and visual analogue scale (VAS) for pain were used. Low back pain was labeled as per standard criteria by senior therapist. All data was analyzed by using SPSS version 21. Frequency and % were used to present data.

RESULTS

A total of 124 security guards were included. Table 1 shows that the Experience of lower back pain. The results demonstrates that the frequency of lower back pain among security guards was 77 (62.1 %). The table 2 indicates that, out of 124 participants, 52.4% (65 individuals) reported not experiencing pain at the moment, while 47.6% (59 individuals) reported feeling pain. The table 3 shows the distribution of pain intensity among participants. 33.9% (42 individuals) reported having no pain at the moment, while 22.6% (28 individuals) described their pain as very mild. 29.0% (36 individuals) experienced moderate pain, and 14.5% (18 individuals) reported their pain as fairly severe.

Table 1: History of backpain experience

Lower back pain	n (%)
Yes	77 (62.1%)
No	47 (37.9%)
Total	124 (100.0%)

Table 2: Prevalence of pain at the time of survey

Pain at the moment	n (%)
Yes	59 (47.6%)

No	65 (52.4%)
Total	124 (100.0%)

Table 3: Intensity of pain

Pain intensity	n (%)
I have no pain at the moment	42 (33.9%)
The pain is very mild at the moment	28 (22.6%)
The pain is moderate at the moment	36 (29.0%)
The pain is fairly severe at the moment	18 (14.5%)

DISCUSSION

In the present study, we found a significant prevalence of lower back pain among security personnel, with 62.1% of participants reporting a history of lower back pain and 47.6% experiencing pain at the time of the survey. This high rate of pain is consistent with previous research that highlights the significant burden of lower back pain in physically demanding professions.^{15,16} Knox et al (2011) conducted the research on incidence of lower backache in active duty person. The overall unadjusted incidence rate of low back pain was 40.5 per 1000 person-years. The incidence rate ratio for the 40 + age group compared with the 20 to 29 years of age group was 1.28¹⁵. Similarly, Sikander et al. conducted a study on security guards of bus rapid transit system and reported that 42 participants experienced minimal disability, with 27 males and 15 females, while 245 participants, including 157 males and 88 females, reported moderate disability. Only 5 participants (4 males and 1 female) experienced severe disability.¹⁶

Naeem et al. reported that 87.7% of security personnel experienced chronic lower back pain. 73.8% of them expressed fear of losing their jobs, 64.5% faced family stress and 83.1% of participants felt pressured.¹⁷ Our study's finding of 62.1% reporting a history of LBP aligns with this, suggesting that security personnel are particularly vulnerable to this condition due to the nature of their job, which often includes long hours of standing, lifting, and occasional physical exertion.

Similarly, Saddique et al. found that 81.5% of security personnel had LBP. Majority of participants had mild to moderate levels of pain severity (49.8%)¹⁸. In our study, 6% (28 individuals) described their pain as very mild. 29.0% (36 individuals) experienced moderate pain, and 14.5% (18 individuals) reported their pain as fairly severe. The disparity could be attributed to the specific job characteristics and environments in which these personnel work. In conflict zones or more physically demanding settings, LBP manifest differently or with greater intensity

due to the additional physical strain faced in these environments.¹⁹ On the other hand, Waterman et al. reported an incidence rate of 1.39 per 1,000 person-years in the U.S.²⁰ This broad, population-level estimate demonstrates the widespread nature of LBP, but our study's focus on security personnel suggests that this group face an elevated risk relative to the general population, further supporting the need for targeted interventions.

The consistency between our findings and previous studies emphasizes the importance of understanding the factors contributing to LBP in security personnel. The high prevalence of pain and the varying intensities reported by participants—33.9% having no pain, 22.6% experiencing mild pain, and 29% reporting moderate pain—demonstrate that while LBP is widespread, its impact can range from minimal to debilitating. The variations in pain intensity also suggest that early interventions, such as ergonomic improvements, physical training, and posture education, could help reduce the severity of LBP and improve the quality of life for security personnel.

CONCLUSION

Our study supports previous research in showing that lower back pain is a significant concern for security personnel, with nearly half of participants experiencing pain at the time of the survey. The findings align with global trends indicating that LBP is a common issue in physically demanding professions. Given the high prevalence and the potential for long-term disability, it is crucial to develop and implement effective preventive measures, including ergonomic workplace adjustments, physical conditioning programs, and education on posture and body mechanics. Further research should continue to explore the long-term effects of LBP in this population and assess the effectiveness of specific interventions aimed at reducing pain and improving work performance.

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