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Research Article

Prevalence of Low Back Pain Among Bank Workers in Peshawar, Pakistan

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Abstract

Low back pain (LBP) is estimated to affect 90% of the global population and is considered the most common reason for functional disability worldwide. The objective of the present study was to measure the severity of back pain according to the visual analog scale (VAS), to identify the prevalence of LBP among bank workers, and to determine the primary risk factors of low back pain among bank workers. This study was submitted to and approved by the Institutional Research Committee (IRC) - NCS University System, Islamabad, Pakistan. A quantitative, cross-sectional research design was employed in this study. Data were only collected from those participants, who were willing and met our inclusion criteria after approval from the graduate committee of the NCS- University system. Before the collection of data, permission was taken from the respective participants. Conveniently 405 participants among the bank workers were collected from various banks in Peshawar, Pakistan. The instruments used include a direct interview, a body discomfort assessment tool that consists of a VAS) and a questionnaire. Data was collected by mixed type questionnaire and confidentiality of information and voluntary participation were ensured by the researcher. Data were numerically coded and captured in Excel, using an SPSS 25 version program. The study's findings provide a baseline of information about the prevalence of back pain among bank workers. It was found that 65.6% of the workers had experienced LBP, with males (80.7%) being more vulnerable than females (19.3%). The most affected age range was 25-38 years, which constitutes the largest proportion of the workforce. This high prevalence in such a significant age group could negatively impact a company's productivity. The study also revealed that the prevalence of back pain was highest among those with job experience of more than three years (69.9%), followed by those with 1-2 years of experience (23.3%), and the least among those with less than one year of experience (6.8%).

Keywords: Prevalence, low back pain, bank workers, visual analog scale, functional disability

1. Introduction

Low Back pain (LBP) is generally described as pain between the costal margin and the gluteal folds (Thakur et al. 2018). LBP is one of the most common musculoskeletal injuries in sedentary individuals, usually associated with high medical costs. Chronic back pain results in severe disability, which makes the individuals find even a minimal task difficult to perform (Subramanian 2017). According to the World Health Organization, LBP is responsible for a major portion of people staying away from work. It was estimated that 70–80% of the world's population has at least one episode of back pain in their lifetime. This condition may cause a decrease in the quality of life of individuals, as well as a decline in physical activity (Singh and Gebrekidan).

LBP is not only considered to be the most common reason for functional disability worldwide but is also estimated to have affected 90% of the global population. Until recently it

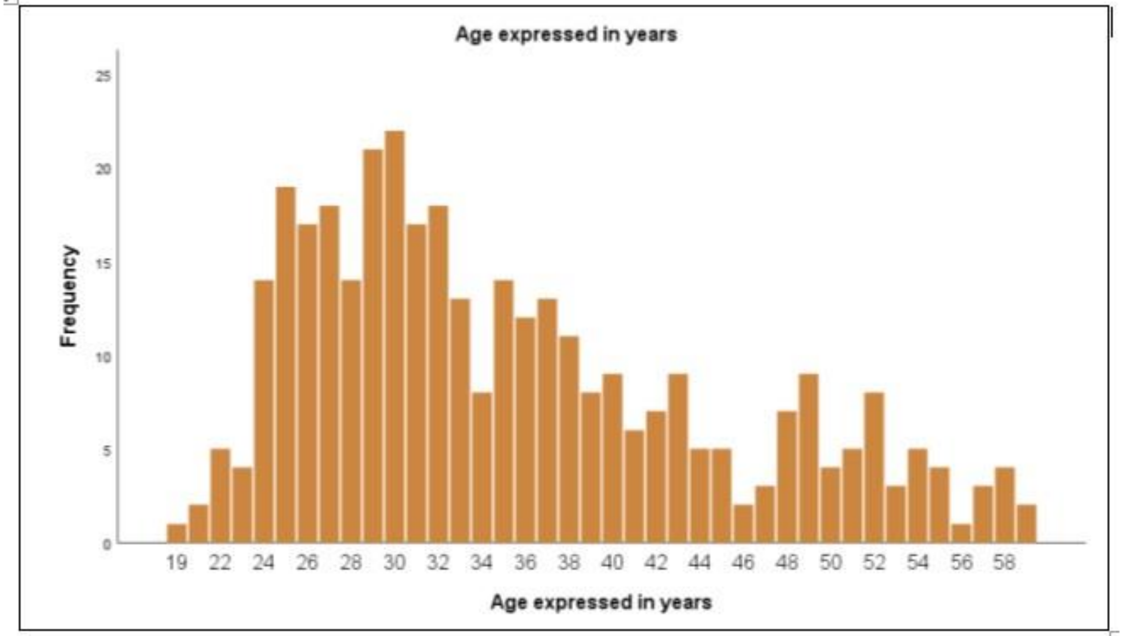

Figure 1: This figure represents the distribution of participants on the basis of age.

was considered a problem limited to Western countries but research conducted during the last decade clearly showed that it is also a major problem in low and middle-income countries (Kanyenyeri et al. 2017). LBP-related disability and work absence account for high economic costs in Western society. Working conditions are often supposed to play an important part in the etiology of back pain. Varying prevalence of LBP has been reported in different occupational groups with a prevalence of 73% - 76% in nurses; 45% in Urban bus drivers; and 70% in the physical therapists of Kuwait.(Kaur, Bindra, and Sinha 2014)

The management of LBP is classified into non-pharmacologic and pharmacologic therapies. Moderate-quality evidence showed that exercise resulted in a small improvement in pain relief and function compared with no exercise. Evidence showed that compared with usual care, exercise resulted in small improvements in pain intensity and function at the end of treatment, although effects were smaller at long-term follow-up. A study reported no clear differences between different exercise regimens in more than 20 head-to-head randomized clinical trials (RCTs) in patients with chronic LBP (Qaseem et al. 2017). Another study showed no difference between exercise therapy and usual care for pain or function in patients with acute or sub-acute pain (Qaseem et al. 2017).

Spinal manipulation is shown to be associated with a small effect on function compared with sham manipulation. A study reported no difference in pain relief at one week between spinal manipulation and inert treatment (educational booklet, detuned ultrasound, detuned or actual short-wave diathermy, anti-edema gel, or bed rest), although one trial showed better longer-term pain relief (3 months) with spinal manipulation. However, functionality did not differ between spinal manipulation and inert treatment at after 3 months.(Qaseem et al. 2017)

Furthermore, no significant differences were observed between Kinesio taping and sham taping for back-specific function after 5 or 12

Table 1: This table shows the frequency of LBP in our study.

Frequency of Low Back pain		
	Frequency	Percent
Yes	231	65.6
No	121	34.4
Total	352	100.0

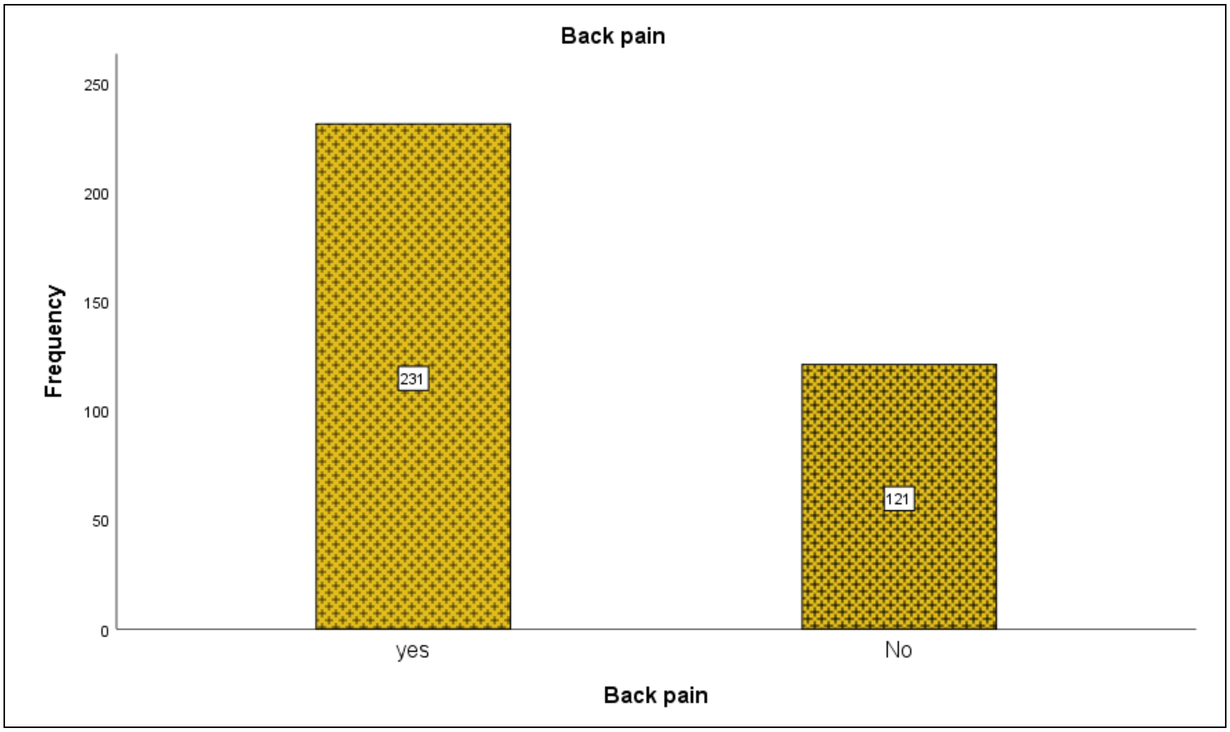

Figure 2: This figure represents the frequency of LBP in participants.

weeks, although effects on pain were inconsistent between the 2 trials (Qaseem et al. 2017). There were no statistically significant differences between Kinesio taping and exercise for pain or function, between traction and physiotherapy versus physiotherapy alone, or between different types of traction in patients with LBP with or without radiculopathy (Qaseem et al. 2017). The current study aimed to find out the prevalence of LBP among bank workers in the city of Peshawar, Pakistan, and identify the association of demographic, occupational, psychological, and social factors with LBP.

2. Methods & Materials

The current study is a descriptive cross-sectional study with an analytic component. This study was conducted in different Govt. and private banks of Peshawar. This study was submitted to and approved by the Institutional Research Committee (IRC) - NCS University System, Islamabad, Pakistan. The study duration was 6 months and was conducted between August 2018 and January 2019. The sampling technique used was non-probability-convenient sampling, The minimum sample size calculated for our study was 405. Both males and females working in private and government banks were included who were involved in office work. Exclusion

Table 2: This table shows the frequency of gender in our study.

Gender		
	Frequency	Percent
Male	284	80.7
Female	68	19.3
Total	352	100.0

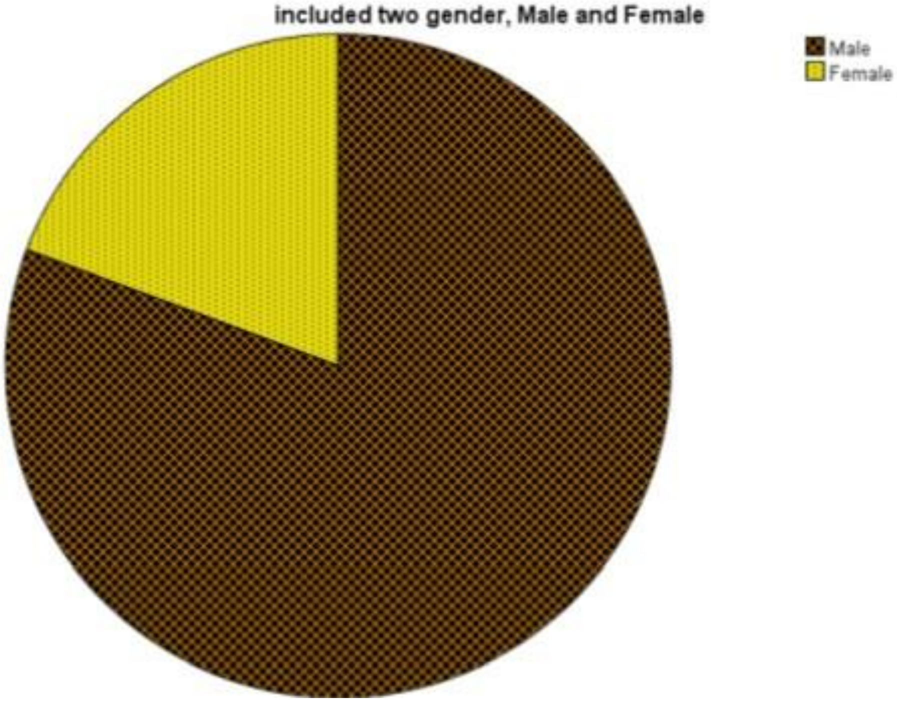

Figure 3: This Figure shows the frequency of gender in our study.

criteria were a history of acute trauma to the back, which can produce an acute inflammatory reaction, and pregnant female bank employees. Data was analyzed by using SPSS version 25 and was presented in tabular forms and graphs. Frequencies, mean, and standard deviation were calculated for numerical variables. Nominal variables analyzed were gender and occupation. The quantitative variables analyzed were pain disability and range of motion. Qualitative data was presented as percentages.

3. Results

Of the 405 participants, 352(87%) professionals fill the questionnaire while 53(13%) participants refused to fill the questionnaire. The minimum age of the participants was 19 years while the maximum age was 59 years (Figure 1). This study reveals that 30 years of age had the highest frequency 22(6.3%) and 29 years of age had the 2nd highest frequency 21(6%). We found that 231(65.6%) participants out of 352 have suffered from back pain while 121(34.4%) participants had no back pain (Table 2, and Figure 2). Among

Table 4; This table shows the job experience of the study participants.

job/experience					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than one year	24	6.8	6.8	6.8
	1 to 2 year	82	23.3	23.3	30.1
	More than 3 years	246	69.9	69.9	100.0
	Total	352	100.0	100.0	

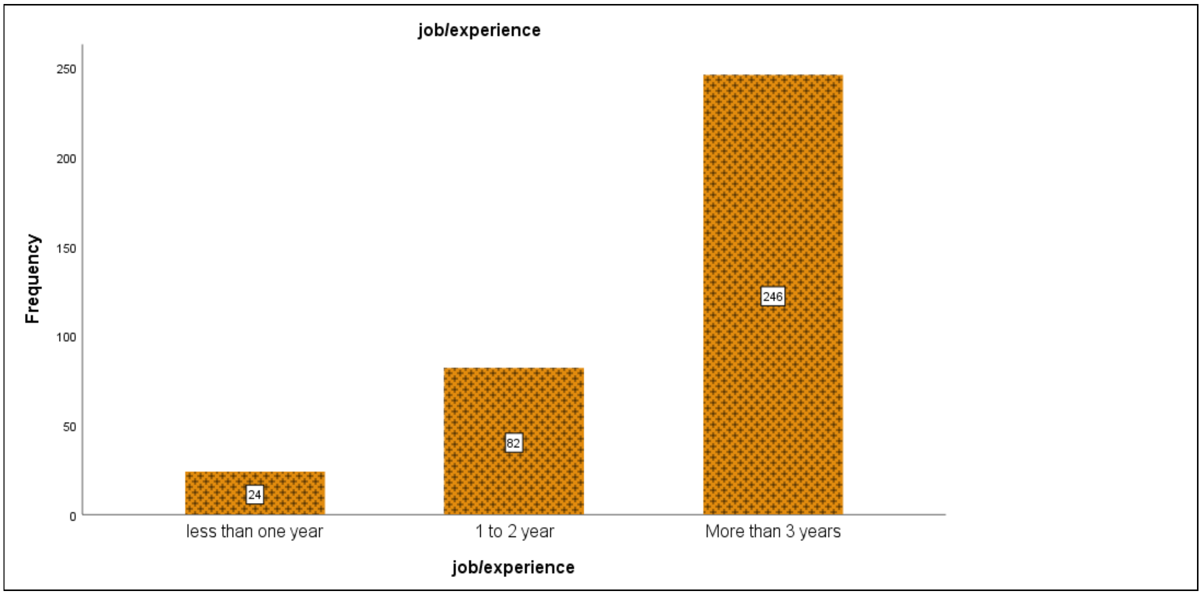

Figure 4 This Figure shows the job experience of the study participants.

the 352 participants, 284(80.7) were male and 68(19.3) were female (Table 3 and Figure 3). 24 participants (6.8%) had job experience of less than one year, 82 participants (23.3%) had a job experience between 1 to 2 years and 246 participants (69.9%) had a job experience of more than 3 years (Table 4 and Figure 4).

We found that among 352 participants 8(2.3) worked time less than 6 hours, 45 participants (12.8) were working time 6 hours, and 299 participants (84.9) were more than 6 hours (Table 5). Several different kinds of treatment were received by bankers for managing LBP. 82(23.3%) of bankers received medication only, 37(10.5%) of bankers received physiotherapy for LBP, 32(9.1%) bankers received both medication and physiotherapy while 79(22.4%) of bankers received no treatment or used homeopathic therapy (Table 6). Table 7 shows the results of each treatment modality and reveals that 102(28.7%) were improved, 22(6.3%) were worse, 70(19.9%) were unchanged and 37(10.5%) of bankers did not receive any treatment. Further analysis showed that bankers work in different kinds of postures during times of activity. Most of the bankers maintain a sitting position 302(85.8%), 40(11.4%) of bankers work in a standing position and 10(2.8%) of bankers work in a bending position (Figure 5).

Table 5: This table shows the daily working hours of our study participants.

Work/time

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 6 hours	8	2.3	2.3	2.3
	6 hours	45	12.8	12.8	15.1
	More than 6 hours	299	84.9	84.9	100.0
	Total	352	100.0	100.0	

Table 6: This table shows the treatment modality employed by our study participants.

Treatment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Medication	82	23.3	35.5	35.5
	Physiotherapy	38	10.8	16.5	51.9
	Other	79	22.4	34.2	86.1
	Both	32	9.1	13.9	100.0
	Total	231	65.6	100.0	
Missing	System	121	34.4		
Total		352	100.0		

4. Discussion

LBP is a very common health problem worldwide and a major cause of disability. The 2010 Global Burden of Disease Study estimated that LBP is among the top 10 diseases and injuries that account for the highest number of disability-adjusted life years (DALYs) worldwide. The current study examined the prevalence of LBP among bank workers. In the current study, it has been found that 65.6% of participants suffered from LBP. This was similar to a study conducted in Manisa, Turkey among computer-using office workers which revealed 66.3% of LBP (Kanyenyeri et al. 2017).

The findings from the current study revealed that 80.7% of males were affected by back pain while the female participants were 19.3%. The literature shows that men are more vulnerable to back pain than female. Kattak et al reported 74.3% of LBP in males and 25.7% in females who were suffering from occupational stress and burnout in the banking sector of Pakistan (Kaur, Bindra, and Sinha 2014).

In the multivariable analysis, it was found bank staff who had no breaks during working time was more likely to have back pain as compared to those who had breaks. Likewise, other studies reported that individuals having breaks while working at computers were experiencing less pain (Lonsdale et al. 2012), while the individuals not having breaks were experiencing more pain (Kanyenyeri et al. 2017).

This study also showed the relationship between working duration and back pain. Working hours of 6-8 per day were reported by 84.9% of participants who experienced back pain. The current study is closely related to the study of Mohammad Abu Towhid Emdad who reported that among the participants with 7-9 hours of working duration, 70.44% experienced LBP (Towhid 2012).In this study, most of the participants (85.8%) maintained long sitting

Table 7: This table shows whether our study participants' condition improved, worsened, or remained unchanged.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Improve	101	28.7	43.7	43.7
	Worse	22	6.3	9.5	53.2
	Unchanged	71	20.2	30.7	84.0
	Not recive treatment	37	10.5	16.0	100.0
	Total	231	65.6	100.0	
Missing	System	121	34.4		
Total		352	100.0		

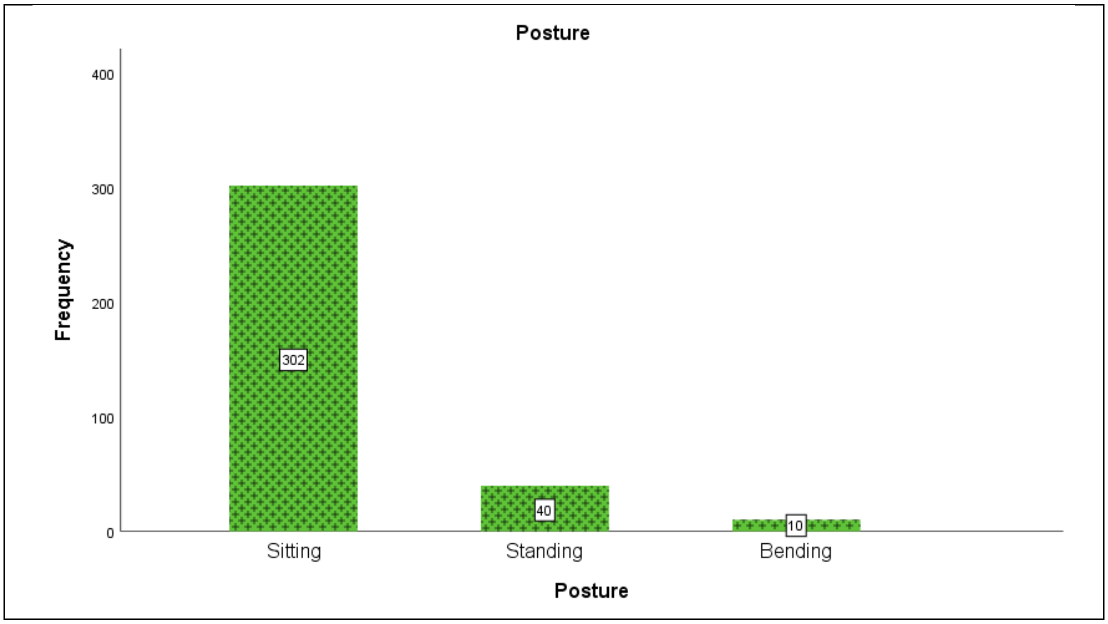

Figure 5: This Figure shows the predominant posture of our study participants during their working hours.

posture during their working hours, and 46.3% experienced LBP. Similarly, others have shown that sitting for >3 hours was associated with increased severity of LBP. The type of sitting posture also influences the incidence of LBP in administrative staff. The current study provides information about the frequency of LBP in bankers and may help to establish guidelines for proper space, equipment, furniture, and environmental conditions suitable for alleviating LBP in bankers.

5. Conclusion

We conclude that bankers have a high prevalence of LBP in the area of Peshawar, Pakistan. This high prevalence may be associated with the type of job, working environment, and job demand. We found a lack of awareness of physical therapy options for managing LBP among bank workers, therefore awareness programs on risk factors and physical therapy are vital to prevent and remediate this most common and costly condition afflicting the society.

Conflict of Interest

The authors declare that they have no conflicts of interest to disclose.

Funding

There were no funding contributions for this research from any source.

Study Approval

This study was approved by the Institutional Research Committee (IRC) - NCS University System, Islamabad, Pakistan.

Consent Forms

Every participant signed a consent form before participating in the research.

Authors Contributions

Conceptualization and experimental work by AR, IA; Statistical analysis and interpretation by AR, Original Draft by M. Nauman and M Naeem, Review & Editing by AA.

Data Availability

The authors have all the data.

Acknowledgments

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