

Prevalence of Low Back Pain in Healthcare Workers in Eastern Region in Saudi Arabia

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Abstract: ***Background:** Low back pain (LBP) is the second most common health complaint leading people to seek medical help. The prevalence of LBP amongst Saudi Arabians is around 18.8%. The prevalence of LBP amongst healthcare providers in Makkah was 74.2%. Healthcare workers are at a great risk of developing occupational LBP. Occupational LBP is associated with more than 50% of nurses' sick leaves. **Aim:** This study aims to assess the prevalence and the risk factors of LBP among all healthcare workers in the Eastern Region, Saudi Arabia. **Methods:** The questionnaire has been distributed to healthcare workers in the Eastern Region. There were 1609 participants. The pre-designed questionnaire were on socio-demographics, years of work, occupation type, risk factors, complaining low back pain, taking medication to alleviate pain, and opinion of its relation to work. **Results:** A total of 1609 subjects completed the questionnaire. Prevalence of LBP was 79%, 822 were male and 787 were female. There was positive significant relationship between being male and developing LBP. Incidence of LBP was highly reported by nurses. We found that the younger participants, the more tendency to visit doctor and taking medications. **Conclusions:** The majority of Saudi healthcare workers experience LBP in their lifetime with highest rate in nurses. Less than half of all healthcare workers cannot control their pain without taking medications. Almost all of participants relate their complaint to work.*

Keywords: Low back pain, prevalence, Saudi Arabia, healthcare workers

1. Introduction

Low back pain (LBP) is the second most common health complaint leading people to seek medical help. The life long prevalence in the United States is 85, while it is 74 in Saudi Arabia 9. Other studies estimated an international prevalence of LBP in general population to range from 15 to 45%. In comparison to Saudi Arabia, the prevalence of LBP amongst Saudi Arabians is around 18.8%. [1]

Amongst all presentations of back pain, 70% are caused by lumbar spine strain referred to as mechanical LBP, 10% are due to age-related degenerative changes in the intervertebral discs and the facets joints, 4% are due to pathological compressive fractures secondary to osteoporosis, 4% due to herniated discs and only 3% due to spinal stenosis.

Healthcare workers are at a great risk of developing occupational LBP [2]. Occupational LBP is burdensome to the functionality and productivity of the healthcare workers and is adversely associated with ramification, namely, disability and frequent absence from work [Error! Bookmark not defined.]. In one study, it revealed that occupational LBP is associated with more than 50% of nurses' sick leaves [3]. Several risk factors have been attributed to occupational LBP to healthcare workers, some of these risk are female gender, advanced age, working in surgical department and high Body Mass Index (BMI) [4, 5, 6, 7, 8]. The prevalence of LBP amongst healthcare providers in Makkah, Saudi Arabia was 74.2%. [9]

Only few studies addressed the prevalence of occupational LBP among in Saudi Arabia [Error! Bookmark not defined., Error! Bookmark not defined., Error! Bookmark not defined., Error! Bookmark not defined.]. This study aims to assess the prevalence, risk

factors of LBP among all healthcare workers in the Eastern Region, Saudi Arabia.

2. Materials and Methods

An electronically designed questionnaire has been distributed to healthcare workers in the Eastern Region during August and September 2016. There were 1609 participants responded to the questionnaire. The pre-designed questionnaire consisted of 8 questions. Questions were on socio-demographics, years of work, occupation type, risk factors, complaining low back pain, taking medication to alleviate pain, and participants' opinion regarding whether the LBP is related to work.

3. Aim of Study

This study aims to assess the prevalence and the risk factors of LBP among all healthcare workers in the Eastern Region, Saudi Arabia.

4. Results

A total of 1609 subjects completed the questionnaire. This study was conducted upon 1609 healthcare worker throughout the Kingdom of Saudi Arabia in both government and private sectors. Prevalence of LBP was 79% (n=1271). The mean age of subjects was 42 years, and age range was from 22 to 63 years old. The number of male participants was 822, whereas number of female participants was 787. Out of male participants, there were 571 (69.4%) experienced LBP. Eighty eight percent (n=700) of female participants had experienced LBP. There was positive significant relationship between being male and developing LBP ($p < 0.01$).

Table 1: Characteristics of study participants

Variable	N	Have experienced LBP		Have visited doctor for LBP		Have taken medication for LBP	
		n	%	n	%	n	%
Gender							
Male	822	571	69.40%				
Female	787	700	88.90%				
	1609	1271	78.90%				
Age group							
18-24	83	60	72.20%	14	23.30%	16	26.60%
25-35	1097	873	79.50%	398	45.50%	348	39.80%
36-45	333	265	79.50%	170	64.10%	120	45.20%
46-55	81	62	76.50%	44	70.90%	33	53.20%
>56	15	11	73.30%	9	81.80%	4	36.30%
		1271	78.90%	635	49.90%	521	40.90%
Specialty							
Physician	561	380	67.70%	124	32.60%		
Nurse	600	540	90%	313	57.90%		
Pharmacist	52	42	80.70%	21	50%		
Technician	193	147	76.10%	85	58.80%		
Non-medical specialist	99	75	75.70%	39	52%		
Hospitalist	104	87	83.60%	53	60.90%		

The majority of the participant in this study were in the age group of 25-35 years old with a total number of 1097 out of 1609 (68%). Subjects aged more than 55 reported to be 0.9% (n=15). Of those, the proportion of male to female is 51.1% (n=787) and 48.9% (n=822), respectively. The majority of the study groups were nurses accounting for 37.3% followed by physicians accounting for 34.9%. Office workers and pharmacists were the minority, 6.2% and 3.2%, respectively. Of those participants who experienced LBP (n=1271, 79%), there were 635 participants (50%) have sought medical advice. There were only 521 participants (41%) have taken medication to relieve LBP. The majority of participants 92.1% (n=1170) thought that LBP is negatively affected by their work.

Incidence of LBP was highly reported by nurses 90% (n=540/600) compared to peers, followed office workers 83.6% (n= 87/104, p <0.01) in comparison of other colleagues. Therefore, nurses and office workers had the highest prevalence of LBP followed by non-medical specialist, technicians and physicians. Office workers (60.9%, p <0.01) are found to have a greater propensity to seek medical advice, and also there was negative significant relationship between being physician and seeking help with only 32.6% (n= 124/380, p <0.01). Unexpectedly, we found that the younger participants, the more tendency to visit doctor and taking medications (p <0.01 for both). Older people in our study believe that their LBP is related to work (p= 0.02). We found no significant relationship between gender and seeking medical advice (p=0.47). Interestingly, the more years the healthcare workers work, the less likely for them to complaint of LBP (p <0.01). This, however, could be explained by the fact that old unhealthy healthcare workers retired early.

Table 2: Shows those experience LBP I relation to the working load in general or directly to healthcare working environment

Working years	Have experienced LBP		LBP related to working load in general		Those who think LBP related directly to healthcare working environment	
	n	%	n	%	n	%
1-5 years	711		536	75.3%	493	69.3%
6-10 years	480		400	83.3%	381	79.3%
11-15 years	170		133	78.2%	117	68.8%
16-20 years	131		110	83.9%	102	77.8%
21-25 years	63		52	82.5%	44	69.8%
>26 years	54		40	84%	33	61.1%
	1609		1271	78.9%	1170	72.7%

5. Conclusions

Our study demonstrated that the majority of Saudi healthcare workers experience LBP in their lifetime with highest rate in nurses. Less than half of all healthcare workers cannot control their pain without taking medications. Almost all of participants relate their complaint to work. Therefore, it is necessary to find effective ways that can improve and encourage the preventive behaviors of the health care workers, as the LBP most commonly caused by lumbar spine muscles strain which is preventable conditions.

6. Abbreviation

LBP= low back pain

7. Competing interests

The authors declare that they have no conflicts of interest.

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