

ORIGINAL ARTICLE

Knowledge of lower back pain by selected demographic variables among clinical students in Abha, Saudi Arabia

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ABSTRACT

Background: Lower back pain (LBP) is a worldwide medical issue and a widespread problem for different ages. Therefore, this study aimed to detect and evaluate the knowledge and awareness about LBP among medical students in King Khalid University, Abha, Saudi Arabia.

Methodology: A cross-sectional study was conducted from December 2018 to February 2019, among both male and female students of different departments in the College of Medical Sciences of King Khalid University, Abha, Saudi Arabia, with a mean age of 20-30 years. Information about knowledge of LBP was collected by using a self-administered questionnaire distributed among all medical students through electronic media.

Results: The study was conducted among 310 participants, and majority of the participants (98%) had good knowledge of LBP, while only 2% had bad knowledge. When the association of the levels of LBP knowledge was assessed with regard to age, gender, marital status, and monthly income of the study participants, it was found that there were statistically insignificant relationships among these and the level of knowledge about LBP, except marital status (p -value = 0.000).

Conclusion: High knowledge of LBP was found among the people in Abha. Age, gender, and monthly income were insignificantly associated with the prevalence of knowledge of LBP.

Keywords: Low back pain; demographic variables; clinical students; knowledge; awareness; medical students.

Introduction

Lower back pain (LBP) is a worldwide medical issue and a widespread problem for different ages [1]. The influence of LBP may arise to 90% of the all countries' population at any time in their lives [2]. The acute onset of LBP arises around the mean age of 30 years, and is expected to increase to the highest level at the age of 45 years until the age of 60 years, which means it is more common at the age of 60 years and above, in 25.1% of men and 35.1% of women [2].

Factors that affect the musculoskeletal system in the body might cause the initiation of LBP, but some activities could lead to the aggravation of this problem, especially activities that are related to work or that are followed in daily practice, like dealing with sharp objects or changes of body posture, and also individual factors, such as increase in age, obesity, stress related to job or social life, and stress level [3].

To obtain an excellent advantage and to prevent and treat LBP, it is preferable to know and read about pathophysiological ways that cause these problems, which might get severe in the future [4]. Therefore, it is essential to make a general overview of a population about LBP and spinal disorders and to evaluate the knowledge about this condition; many articles in multiple parts in the world have detected the knowledge of a population with regard to spinal problems [5]. Psychosocial therapy and practices, such as sports and exercise, have a very

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profound effect on how to control back pain, but all of these therapies and remedies are dependent on the knowledge and awareness of the people [6].

The Low Back Pain Knowledge Questionnaire (LKQ) is a validated and scientific tool to measure the level of knowledge about LBP among a population [7]. In a previous study conducted at the Research Center of Tehran University of Medical Science, it was found that 74% of the patients had limited information about LBP [6]. Another study conducted on undergraduate medical students of the Medical Sciences University of Maiduguri showed the partial knowledge of LBP and only 10% of the total study population had knowledge of LBP [2]. Therefore, this study aimed to detect and evaluate the knowledge and awareness about LBP among medical students in King Khalid University, Abha, Saudi Arabia.

Subjects and Methods

A cross-sectional study was carried out from December 2018 to February 2019 among the students from different departments in the College of Medical Sciences of King Khalid University, Abha, Saudi Arabia. A convenience sampling of clinical students across the undergraduate years was carried out, which included the department of medical science, College of Medicine, College of Dentists, College of Pharmacy, College of Applied Medical Science (physiotherapy, radiology, and laboratory), and Nursing College.

Information about the knowledge of LBP was collected by using the LKQ which was distributed among all medical students through electronic media and the students sent the self-administered questionnaire back through Gmail. The LKQ was developed and validated by Maciel et al. [7] and this questionnaire was translated into Arabic language for the ease of participants. Firstly, the participants were asked to fill in their demographic details, including age, gender, marital status, college, level of course, and monthly income.

The LKQ consisted of 16 questions designed to assess the knowledge and awareness level of the participants about the LBP. The LKQ covered areas such as the general information about the anatomy of the spine, basic knowledge about LBP, etiology of LBP, classification of LBP, diagnosis, and general management of LBP. According to the number of questions answered correctly, the participants were categorized into three categories: participants who answered all the questions correctly were considered knowledgeable; participants who answering some questions correctly were considered partially knowledgeable; and participants who failed to answer all the questions correctly were considered unknowledgeable.

Data were entered into Microsoft Excel 2010, including the demographic data and answers of the LKQ about LBP knowledge. Data were then analyzed using Statistical Package for the Social Sciences version 21. The means, medians, standard deviations, and percentages were

obtained for the categorical variables. Cronbach’s alpha was utilized to assess the internal consistency among LKQ items. The Mann-Whitney U test was used to compare the group. $p < 0.05$ was considered as statistically significant.

Results

A cross-sectional study was conducted among a total of 310 participants from December 2018 to February 2019, among both male and female students of different departments in the College of Medical Sciences of King Khalid University, Abha, Saudi Arabia, with a mean age of 20-30 (92%) years. Only 8% of the respondents were below 20 years (which means they were 19-20 years old), and only one respondent was above 50 years. Both genders were included in the study; however, the ratio of females was slightly higher than that of males. Furthermore, majority of the participants in the study were single (95%) (Table 1).

In addition, the monthly income of more than three-quarters (80%) of the respondents was less than 5,000 Saudi riyals (SR), whereas the monthly income of 6% of the participants was 5,000-10,000 SR, while only 5% had a monthly income of more than 20,000 SR (Figure 1).

When the knowledge of participants was assessed about LBP using LKQ, it was found that majority of the participants (98%) had good knowledge of LBP, while only 2% had bad knowledge (Figure 2).

Furthermore, when the association of the levels of LBP knowledge was assessed with age, gender, marital status, and monthly income of the study participants, it was found that there were statistically insignificant relationships between them and the level of knowledge about LBP, except marital status (p -value = 0.000). The knowledge of LBP symptoms was high among females than males. Single people (93.9%) and people with low income (78.1%) had better knowledge about LBP symptoms than others. When the knowledge among students of different colleges was compared, it was

Table 1. Demographic variables of the participants (n = 310).

Demographic Variables		Frequency	Percentage (%)
Age groups	Below 20 years	24	7.7
	20-30	285	91.9
	30-40	0	0.0
	40-50	0	0.0
	50+	1	0.3
Gender	Females	168	54
	Males	142	46
Marital status	Single	294	95
	Married	14	4.5
	Divorced	2	0.5

Knowledge of lower back pain

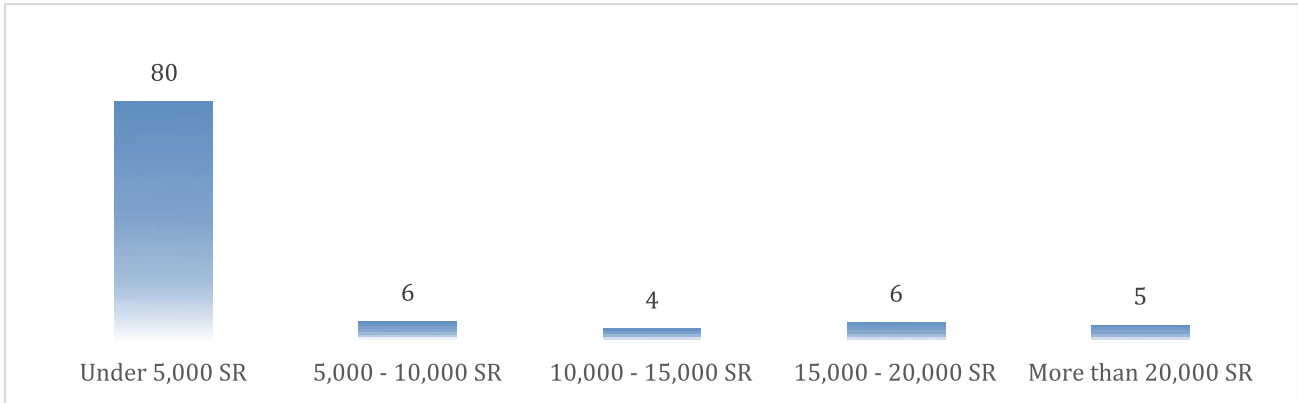


Figure 1. Monthly income of the study participants (n = 310).

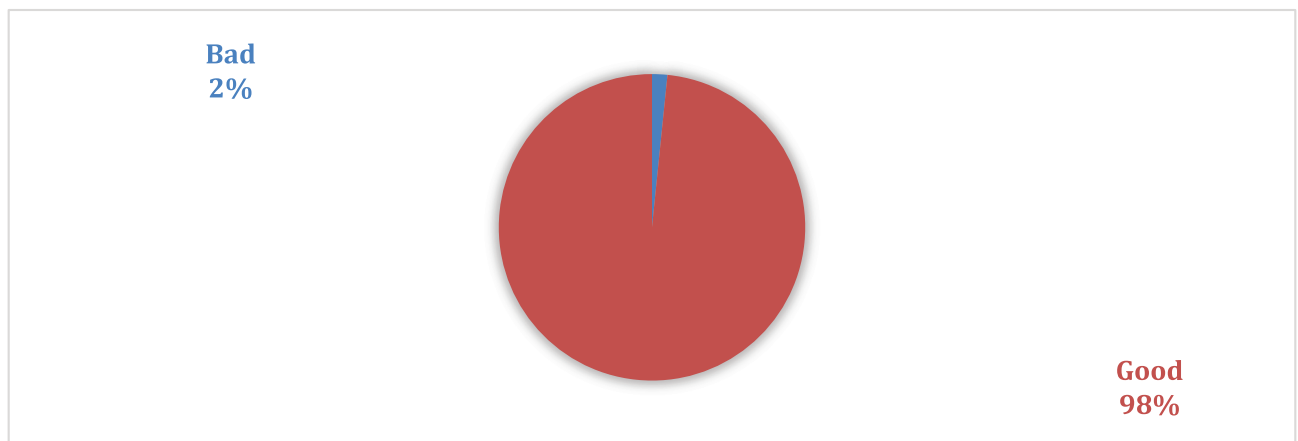


Figure 2. Knowledge level of the participants about LBP.

found that the medicine college students had a better knowledge about LBP (77.7%), while the pattern of LBP knowledge between students in various studying years in colleges was observed to be directly proportional with the studying year (Table 2).

Discussion

The results of this study showed high knowledge of LBP (98%) among people in Abha, Saudi Arabia. The results found were in agreement with a previous research conducted on the prevalence of LBP among nurses working in Poursina Hospital in Rasht, Iran, which showed 70% prevalence for LBP among nurses [8]. Another study showed that age, body mass index (BMI), and physical activity were significantly associated with the prevalence of LBP. The relationship between gender, occupation, marital status, smoking, family history, frequency of lifting heavy things, work experience, and workplace was not significantly confirmed, same as the results of the current study [9].

The prevalence of LBP varies according to occupation, but the prevalence rate could vary due to differences in occupational factors, different definitions of back pain, or back pain prevalence rate in different

times. Therefore, Ramazani Badr et al. [8] reported a prevalence of 52.7% in nursing staff. The cumulative incidence of back pain was assessed at 57.7% and the annual incidence rate was at 1.5% in Bejia et al.'s [10] investigation. A higher prevalence of LBP (73%-76%) was reported in the study of Maul et al. [11]. Heavy physical activities, such as moving and lifting patients, are the most important risk factors for LBP among nurses.

Most researchers believe that physical factors only partially explain the high prevalence of LBP, and psychosocial factors in the work environment could not be ignored [8]. This study was carried out on 350 nurses; a high percentage of them were female unlike Bejia et al.'s [10] investigation where more subjects were male. This can be related to the fact that women constitute a large portion of the nursing profession in Iran. There was no significant relationship between gender and back pain. This finding was similar to the study of Yip [12]. Several studies have also found that gender is not associated with the risk of LBP [13-16]. Nearly 50% of the nursing staff performed an exercise that led to no significant result. Regular physical activities, due to strengthening the back muscles, reduce the chances of LBP. But there are

Table 2. Association of LBP knowledge with background characteristics.

Variables		Knowledge LBP			p-value
		Bad	Good	Total	
Gender	Male	1.3%	44.8%	46.1%	0.126
	Female	0.3%	53.5%	53.9%	
Age	Less than 20	0.3%	7.4%	7.7%	0.582
	20-30	1.3%	90.6%	91.9%	
	50+	0.0%	0.3%	0.3%	
Marital status	Married	0.0%	4.5%	4.5%	0.000 ^a
	Divorced	0.3%	0.0%	0.3%	
	Single	1.3%	93.9%	95.2%	
College	Medicine	1.0%	77.7%	78.7%	0.054
	Dental	0.3%	5.2%	5.5%	
	Pharmacy	0.0%	2.6%	2.6%	
	Radiology	0.0%	1.3%	1.3%	
	Lab	0.0%	1.3%	1.3%	
	Physiotherapy	0.0%	1.3%	1.3%	
	Paramedics	0.0%	1.9%	1.9%	
	Nurse	0.0%	5.2%	5.2%	
	Public health	0.0%	1.0%	1.0%	
Others	0.3%	1.0%	1.3%		
Studying year	1st year	0.3%	6.1%	6.5%	0.115
	2nd year	0.0%	15.2%	15.2%	
	3rd year	0.6%	10.0%	10.6%	
	4th year	0.0%	22.3%	22.3%	
	5th year	0.6%	25.2%	25.8%	
	6th year	0.0%	19.7%	19.7%	
Month income	Under 5,000 SR	1.6%	78.1%	79.7%	0.862
	5,000-10,000 SR	0.0%	6.1%	6.1%	
	10,000-15,000 SR	0.0%	3.5%	3.5%	
	15,000-20,000 SR	0.0%	5.8%	5.8%	
	More than 20,000 SR	0.0%	4.8%	4.8%	

^aStatistically significant.

studies that acknowledge the ineffectiveness of exercise in reducing the incidence of LBP [13,17,18]. There was a significant relationship between BMI and history of LBP. This was consistent with the results of another study conducted on the effect of BMI in LBP [19].

Nurses' LBP can reduce the quality of healthcare services and increase the dissatisfaction of patients as a result. In order to increase the level of patient satisfaction with nursing services, physical activity, diet modification, and weight loss are recommended. Also, the establishment of training classes could be somewhat effective in order to control biomechanical factors of LBP. So, conducting studies addressing biomechanical factors involved in LBP is recommended. In future research, determining the amount of cost due to the absence of staff and its reflection in the care of patients is suggested.

Conclusion

The present study showed high knowledge of LBP among people in Abha. It was also observed that age, gender, college, studying years, and monthly income were insignificantly associated with the prevalence of knowledge of LBP, while marital status was significantly associated with it.

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None.

List of Abbreviations

BMI	Body mass index
LBP	Low back pain
LKQ	Low Back Pain Knowledge Questionnaire
SR	Saudi riyals

Conflict of interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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Consent for publication

Written informed consent was obtained from all participants.

Ethical approval

The Research Ethics Committee 5th Meeting today (for the year 2018) October 23, 2018, (REC # 2018-05-31) have been reviewed and approved.

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