Original Article

Association of pain intensity with quality of life and functional disability in university students with lumbago

Afia Fatima, Fahad Tanveer, Ashfaq Ahmad, Syed Amir Gillani

University Institute of Physical Therapy, The University of Lahore, Pakistan

Objective: To determine an association of pain intensity with quality of life and functional disability in university students with lumbago.

Methodology: In this cross sectional study 213 students participated. Standard questionnaire Numeric pain rating scale, Utian quality of life scale Oswestry Low Back Pain Disability Questionnaire were used for the data collection.

Results: Mean age of students was 21.05±1.970 years (range 18-24). Out of 213 students, 143 had lower quality of life. There was an association between pain intensity and quality of life (p=0.006). Out of 213 students, 120 had minimal disability with lower quality of life. There was strong association (p=0.015) between quality of life and functional disability.

Conclusion: There was a strong association between pain intensity and quality of life, pain intensity and functional disability, quality of life and functional disability in university students with low back ache. (Rawal Med J 201;43:81-83).

Key Words: Pain intensity, Quality of life, functional disability, lumbago.

INTRODUCTION

Musculoskeletal pain showed association with more extreme pain, raised pain-related disability, and lessened quality of life with health related problems.[1] Low back pain (LBP) is, to date, a devastating medical issue and its seriousness keeps on expanding in the present society. The connection amongst symptoms and the level of handicap in performing activities of daily living may be much entangled. Prolongation of the difficult period has a huge negative effect on the everyday elements of the patient. Lumbago is regular musculoskeletal issue influencing 80% of individuals sooner or later in their lives. Back pain is a standout amongst the most widely recognized medical issues, influencing 8 out of 10 individuals at same point amid their lives.[2,3]

A survey by Poulain et al reported 3.5 years record of 105 subjects with chronic LBP following a functional repair program; 55% subjects went back to work.[4] Handrakis et al in a pilot study on college students showed that the back extensors muscles were found to be changed between the both disability and pain group and low back skeletal muscle strength and low levels of physical activity in young adults may have clinical pertinence for the suppression and treatment of LBP and disability.[5] A systematic review by Kelly et al to measure the correlation between chronic LBP and sleep demonstrated the chronic low back pain (CLBP) and sleep were strongly related to each other.[6] The basic aim of this study was to evaluate association present between pain intensity, quality of life and functional disability.

METHODOLOGY

This cross-sectional study used Standard questionnaire The Numeric pain rating scale, Utian quality of life scale Oswestry Low Back Pain Disability Questionnaire were used for the data collection. Data were analyzed using SPSS software and Chi-square test was used dependig on the type of variabl. The Sample size of 213 was calculated by the formula:

The sample size *n* and margin of error *E* are given by

x	=	$Z(^{c}/_{100})^{2}r(100-r)$
n	=	$^{Nx}/_{((N-1)E^{2}+x)}$
E	=	$\mathrm{Sqrt}[^{(N-n)x}/_{n(N-1)}]$

where N is the population size, r is the fraction of responses that you are interested in, and $Z(c/100)$ is

the critical value for the confidence level *c*. Margin of error= 5%, level of confidence =95%, Population size=476,Response distribution=50%.

RESULTS

There were total 213 students with mean age of 21.05±1.970 years (range 18-24). There were 50(23.5%) male and 163(76.5%) female. There were total of 143 students with lower quality of life out of which, 54 were with mild pain, 76 with moderate pain and 13 with severe pain. Seventy students had higher quality of life, out of which 13 were with mild pain, 53 with moderate pain and 4 with severe pain. There was an association between pain intensity and quality of life (p=0.006) (Table 1). There were total of 67 students with mild pain out of which 56 had minimal disability and 11 moderate disability. There were a total 129 students with moderate pain out of which 118 had minimal disability and 11 moderate disability. There were a total 17 students with severe pain out of which 1 had minimal disability and 6 moderate disability and 8 severe disability and 2 bed ridden (Table 2).

Table 1. Association of pain intensity and quality of life (n=213).

		Quality of Life		P-Value
		Lower Quality of Life (48-74%)	Higher Qualityof Life (75-100%)	
Pain Intensity	Mild Pain	54	13	
	Moderate Pain	76	53	0.006
	Sever Pain	13	4	

Table 2. Association of pain intensity and disability (n=213).

		Functional Disability				P-Value
		Minimal Disability (0-20%)	Moderate Disability (21-40%)	Severe Disability (41-60%)	Bed Ridden (81-100%)	
Pain Intensity	Mild Pain	56	11	0	0	
	Moderate Pain	118	11	0	0	
	Sever Pain	1	6	8	2	

Table 3. Association of pain intensity and functional disabily (n=213).

		Functional Disability				P-Value
		Minimal Disability (0-20%)	Moderate Disability (21-40%)	Sever Disability (41-60%)	Bed Ridden (81-100%)	
Quality of Life	Lower Quality of Life (48-74%)	120	15	8	0	
	Higher Quality of Life (75-100%)	55	13	2	0	0.015

There were 213 students out of which 120 had minimal disability with lower quality of life, 15 had moderate disability with lower quality of life, 8 had sever disability with lower quality of life and No student was bed ridden with lower quality of life while 55 had minimal disability with higher quality of life, 13 had moderate disability with higher quality of life, 2 had sever disability with higher quality of life. There was a strong association (p=0.015) between quality of life and functional disability (Table 3).

DISCUSSION

Low back pain is viewed as real health issues in present day community since they may cause critical disability and successive utilization of health administrations. Woby et al reported strong connection between pain intensity and disability.[7] Other studies by Peters et al and Woby et al also observed that there was a solid relationship between pain intensity and disability.[8],[9] Present study showed the similar findings that there was a significant association between pain intensity and disability.

It is remarkable that intensity of pain just clarifies a direct measure of the fluctuation in disability, in this manner demonstrating that disability must be affected by different components. In our study, age along LBP appeared to have no forceful effects in participants. However, a study by Poulain et al reported that the age was connected of LBP appears to affect the productivity, as respondents whose LBP began before the age of 35 had a bigger number of chances of coming back to work than others.[4]

A clear negative influence of disability and pain on quality of life was reported in the study of Kovacs et

al in Spanish LBP patients.[10] We also found that there was a strong association (p=0.015) between quality of life and functional disability. Greater number of respondents who had the disability demonstrated low quality of life. Intensity of pain also influenced the quality of life.

CONCLUSION

There was a strong association between pain intensity and quality of life, pain intensity and functional disability, quality of life and functional disability in university students with low backache.

Author contributions:
Conception and design: Afia Fatima
Collection and assembly of data: Afia Fatima
Analysis and interpretation of the data: Fahad Tanveer
Drafting of the article: Fahad Tanveer
Critical revision of the article for important intellectual content: Ashfaq Ahmad
Statistical expertise: Fahad Tanveer
Final approval and guarantor of the article: Syed Amir Gillani
Corresponding author email: Afia Fatima: afia.fatima89@gmail.com
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