PREVALENCE OF LOW LEVEL OF PHYSICAL ACTIVITY DUE TO FEAR OF PAIN IN SUBJECTS WITH LOW BACK PAIN

Asif Saleem[1*],Kiran Fatima[2], Shiza Arshad[2], Sidra Khalid[2]

Abstract: Low back pain is a common health problem all over the world, affects the people of all ages. Fear of avoidance is resisted behavior of a subject to movement or activities based on fear. The current study was conducted to observe the association of increased fear of pain and lower level of physical activity with its prevalence and to explore fear of avoidance beliefs to increase awareness regarding increase in physical activity in subjects with backache to decrease burden on healthcare system. 150 subjects were included in this study based on inclusion criteria. Data was collected by using Fear Avoidance Belief Questionnaire (FABQ) Hannover Functional Ability Questionnaire, and Visual Analogue Scale (VAS) to asses pain-related fear, functional abilities and pain intensity respectively. The results revealed that patients with severe pain have increased fear avoidance beliefs. There is statistically strong association between elevated fear avoidance beliefs and low level of physical activity in patients with low back pain. It is concluded that a strong association exists between elevated fear avoidance beliefs and lower level of physical activity in subjects having low back pain. Fear of pain results in restriction of physical activity more than pain itself.

1. Department of Physical Therapy, Mayo Hospital Lahore

2. Department of Physical Therapy, University of Lahore

Corresponding Author:
asifsaleempt123@hotmail.com

Keywords: Low back pain, fear avoidance beliefs, level of physical activity, fear of movement, Fearavoidance, beliefs questionnaire, Hannover functional ability questionnaire, Visual analogue scale

INTRODUCTION

back pain can be defined as pain, uneasiness, muscle stress, and tension. confined upper to the lower level of the gluteal crease and beneath the costal margin, with or without pain radiating to the lower limb (1). Lumbago or low back ache is the 5th commonest cause of doctor's appointments and 4th leading cause of mortality worldwide (WHO). Approximately 6080 percent of the population is affected by lumbago during their lifespan. Due to low backache, 1112% of people became physically inactive, and t h i s affects 31% o f individuals over 15 years of age (2). Physical inactivity is defined as inadequate cooperation in the recommended level of physical activity during vacation and an increasingly inactive lifestyle in office and housekeeping activities. can be sustained and exaggerated by fear of pain in human imagination and avoidance of activity performance, even in absence of identifiable disease (3)

Low back pain and disability are the constructors of avoidance behavior and stress (4,5). Pain leads to functional restriction and is more important than anatomical and structural impairment. When normal abilities of the body are lost due to pathological, physiological, and anatomical abnormalities this is called Impairment. Impairment always leads to disability. Physical impairment and disability depend only 10% on the severity of pain (6). Psychological factors especially cognitive factors are the most important that lead to the persistence of low back pain and the development of disability. Disability of LBP patients along with routine activities,their results of treatment an

The experience of chronic pain and disability are influenced by fear and anxiety. Fear avoidance is referred to as resistance to movements and activities that

are depending on fear. “Fear-avoidance” can be described by the model that pain perception

patients’ ability to perform their work again is predicted by Fear-avoidance beliefs (7).

MATERIAL AND METHOD

Data was collected from outdoor patients of the physical therapy department in 2 government setups of Faisalabad i.e., DHQ Hospital and Allied Hospital. A sample size150 patients were selected through a convenient sampling technique in this study.

PROCEDURE

This cross-sectional study was conducted on low back pain in the district of Faisalabad. The participants were included according to the defined selection criteria. Data regarding their pain intensity, pain-related fear, and functional abilities were collected by using Visual Analogue Scale (VAS), Fear Avoidance Belief Questionnaire (FABQ), and Hannover Functional ability Questionnaire respectively. Analysis of data was performed with SPSS software and findings were drawn.

DATA ANALYSIS PROCEDURE

SPSS version 17 was used to examine the data collected from the target population. Independent sample T-test one-way ANOVA test was applied to analyze the data.

RESULTS

Classification of participants according to pain intensity is given in Table: 1 where 22.7% of participants reported mild pain, 40.7% of participants reported moderate pain and 36.7% of participants reported severe pain.

The chi-square value x2 =16.7 and p-value = .002 (P<0.05) shows that there is a statistically strong association between fear avoidance beliefs and level of physical activity in low back ache patients.

The table shows that there is no prominent difference between Males (M = 2.7818, S. D = 0.45910) and Female (M= 2.8000, S. D = 0.45195) = -.236 which indicates both types of gender shows similar response regarding fear avoidance beliefs.

DISCUSSION

Lumbago is a major catastrophizing health issue and the 5th commonest cause of doctor’s appointments. (2). The study was directed to observe lower levels of physical activity due to fear regarding pain in subjects having low back pain. The data was collected from a population having the required characteristics using cross- a sectional study design.

A study was conducted to measure kinesiophobia and physical therapy-related MSK pain in patients and their general physicians. Tempa Scale of kinesiophobia was used to examine fear regarding movement. Pain perception was higher in patients referred by physicians with pain-related fear than those patients referred by physicians without any pain-related fear. MSK pain and fear of movement can be treated well by an appropriate combination of physical therapy and psychotherapy sessions (8).

A cross-sectional study conducted by Marshall, Schabrun, & Knox, 2017, using the following questionnaires: Oswestry Low Back Pain Disability Index, the visual analog scale, The Fear Avoidance Beliefs Questionnaire, The Pain

Catastrophizing Scale, Hospital Anxiety and Depression Scale. It was concluded that fear regarding pain, destructive behavior and stress strongly mediate the association between the level of pain and disability (9-11). These previous studies support this current study which is based on the idea that subjects having low back pain reported increased avoidance behavior and low level of physical activity.

The importance of physical activity can be understood by these studies, which

concluded that highly educated subjects stay active during their free time. And subjects with low education levels remained physically inactive in their leisure time anddeveloped back pain, which further

CONCLUSION

avoidance beliefs and lower level of physical Both male and female patients reporting. activity in subjects having lower back pain. Fear lumbago has an equal level of fear regarding the pain of pain results in a lower level of physical activity and avoidance behavior. Most of the participants were more than the pain itself. with back pain have moderate pain severity.

REFERENCES

1. Burton AK, Balagué F, Cardon G, Eriksen H, Henrotin Y, Lahad A, et al. European guidelines for prevention in low back pain. 2004. 121-126
2. Balagué F, Mannion AF, Pellisé F, CedraschiCJTl. Nonspecific low back pain. 2012;379(9814):482-91.
3. Vlaeyen JW, Linton SJJP. Fear-avoidance and its consequences in chronic musculoskeletal pain: a state of the art. 2000;85(3):317-32.
4. Physiopedia co. inactivity and low back pain 2017 [Available from: https://www.physio-pedia. com/index.php?title=Inactivity_and_Low_b ack_ pain&oldid=174397.
5. Grotle M, Vøllestad NK, Veierød MB, Brox JIJP. Fearavoidance beliefs and distress in relation to disability in acute and chronic low back pain. 2004;112(3):343-52.
6. Waddell G, Newton M, Henderson I, Somerville D, Main CJJP. A Fear-Avoidance Beliefs Questionnaire (FABQ) and the role of fear-avoidance beliefs in chronic low back pain and disability. 1993;52(2):157-68.
7. Poiraudeau S, Rannou F, Baron G, Le Henanff A, Coudeyre E, Rozenberg S, et al. Fear-avoidance beliefs about back pain in patients with subacute low back pain. 2006;124(3):305-11.
8. Perrot S, Trouvin A-P, Rondeau V, Chartier I, Arnaud R, Milon J-Y, et al.
9. Kinesiophobia and physical therapyrelated pain in musculoskeletal pain: A national multicenter cohort study on patients and their general physicians. 2018;85(1):101-7.
10. Marshall PW, Schabrun S, Knox MFJPo. Physical activity and the mediating effect of fear, depression, anxiety, and catastrophizing on pain related disability in people with chronic low back pain. 2017;12(7):e0180788.
11. Schaller A, Exner A-K, Schroeer S, Kleineke V, SauzetOJBri. Barriers to Physical Activity in Low Back Pain Patients following Rehabilitation: A Secondary Analysis of a Randomized Controlled Trial. 2017. 165-173

Table 1: Classification of participants according to their severity of pain measured by Visual Analogue Scale

Pain intensity	Frequency of subject (n=150)	Percentage %
Mild (1-3)	34	22.7
Moderate (4-6)	61	40.7
Severe (7-10)	55	36.7

Table: 2 Level of fear in the patient avoiding physical activity

	N	Yes	With effort	with help from others	X2	p-value
Low fear	3 2.0	0 0	3 2.0	0 0		
Moderate fear	25 16.7	1 .7	22 14.7	2 1.3	16.73	.002
Elevated fear	122 81.3	0 0	70 46.7	52 34.7		
Total	150 100.0	1 .7	95 63.3	54 36.0		

Table:3 Shows fear avoidance beliefs of subjects with respect to their pain intensity (mild, moderate and severe):

Pain intensity	N	Mean	Standard deviation
Mild pain	34	2.6176	0.55129
Moderate pain	61	2.7541	0.50516
Severe pain	55	2.9455	0.22918
Total	150	2.7933	0.45313

Table: 4 Shows comparison regarding fear avoidance beliefs between males and females:

Gender	N	Mean	S. D	Df	t-value	p-value
Male Female	55 95	2.7818 2.8000	0.45910 0.45195	148	-.236	0.814