

Impact of Kinesiophobia on Functional Disability in the Patients With Chronic Low Back Ache

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ABSTRACT

OBJECTIVE: To assess the impact of kinesiophobia on functional disability in the patients with chronic low back ache.

STUDY DESIGN: A cross sectional observational study

PLACE & DURATION: Mayo Hospital Lahore, Jinnah Hospital Lahore, and Advance Pain Centers Lahore. The study was completed in 6 months from 1st January 2017 to 30th June 2017

METHODOLOGY: The subjects with kinesiophobia, pain lasting for more than 6 Months, age between 25-50 years and both genders were included. Roland Morris Disability Questionnaire was used to check the functional disability among people having low back ache. Fear avoidance belief questionnaire was used to check the kinesiophobia among people having low back pain.

RESULTS: Among a total of 138 patients with chronic low back ache out of which 40% were male and 25.7% female 59% patients had high fear and mild disability, 32% high fear moderate disabilities and 11% high fear and sever disability while 7% had low fear and mild disability, 10% low fear and moderate disability and 19% low fear and sever disability. There was a significant ($p \leq 0.05$) association between kinesiophobia and functional disability with ($p = 0.000$)

CONCLUSION: Kinesiophobia has a strong impact on functional disability in the patients with chronic low back ache

KEYWORDS: Patients, Impact, Kinesiophobia, Functional Disability, Chronic Low Back Ache,

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INTRODUCTION

Backache is the commonest cause due to which patients visit to their general physician. There are many factors which help to change acute pain into chronic pain and they are interlinked with each other¹ Pain associated fear can lead to disabilities, affects physical performance, commonest cause of poor health, isolation and can lead functional limitations and impairments² Patient start to stay in isolation stops its daily life activities due to which level of fear exaggerates and leads to the phobic state. Three model responses also play a small part to create a phobic state. It includes behavioral response, a cognitive response, and psychophysiological response³ Studies shows that past medical history of pain and its memory can induce the pain, it can initiate the phobic phase of

movement and patient start to adopt the pain avoidance behavior⁴ Long term pain leads to withdrawal of functional life which leads to mood disturbances, depression and isolation. Studies shows that irritability and disuse can cause decrease pain tolerance level⁵ The result of bed rest is substantial loss of bone calcium, muscle become weak and a shortening of the muscle tendons.⁶ Due to pain patient starts to avoid specific activities which stimulates the pain. Gradually this leads to reduction in physical and social interaction with society. Phobic behaviors regarding to pain and movement can cause impairment and functional limitations and as well as psychological issues.⁷ Face-off and dodging are attributed as two main extreme reactions to fear of which the former leads to the reduction of fear over time. During pain patient starts to avoid certain activities because they thought that movement in that angle can initiate pain.⁸ Studies shows that during incident of fear in movements of backache patients significantly shows high muscle reactivity and face off response.⁹ No such study was performed in this region. Previous researches were on prevalence and frequencies but this study shows the relation of chronic low back pain with kinesiophobia. This study will help to access the fear factors of movement. It will promote functional independence and will prevent the further limitations of movement. It will improve the quality of life. Kinesiophobia is an excessive, irrational, and debilitating fear of physical movement and activity resulting from a feeling of vulnerability due to painful injury or reinjury¹⁰ The objective of the study was to assess the impact of kinesiophobia on functional disability in the patients with chronic low back ache.

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METHODOLOGY

In this cross sectional observational study convenient sampling technique was used for data collection of 138 participants from Mayo Hospital Lahore, Jinnah Hospital Lahore and Advance pain centers Lahore in 6 months from 1st January 2017 to 30th June 2017. The sample size was calculated by using the online Raosoft sample size calculator. The subjects with the pain lasting more than 6 Months, having kinesiophobia, age between 25-50 years, both males and females were included in

which 84(40%) were male and 54(25.7%) female with 24(11.4%) between 20-30 years, 43(20.5%) between 31-40 years and 71(33.8%) between 41-50 years. TABLE-I 59% patients had high fear and mild disability, 32% high fear moderate disabilities and 11% high fear and sever disability while 7% had low fear and mild disability, 10% low fear and moderate disability and 19% low fear and sever disability. There was a significant ($p < 0.05$) association between kinesiophobia and functional disability with ($p = 0.000$) TABLE - II

TABLE - I: FREQUENCY AND PERCENTAGE OF AGE AND GENDER (N=138)

Variable	Construct	Frequency	Percentage
Age	20-30 Years	24%	24%
	31-40 Years	43%	43%
	41-50 Years	71%	71%
Gender	Male	84%	84%
	Female	54%	54%

TABLE - II: CROSS TABULATION AND P-VALUE BETWEEN KINESIOPHOBIA AND FUNCTIONAL DSIABILITY (N=138)

ASSOCIATION		KINESIOPHOBIA	
		HIGH FEAR(>34, >15)	LOW FEAR(<34, <15)
FUNCTIONAL DSIABILITY	MILD (0-8)	59(59%)	7(7%)
	MODERATE (9-15)	32(32%)	10(10%)
	SEVERE (16-24)	11(11%)	19(19%)

the study whereas patients with any trauma, recent surgery, systemic disease, spinal cord injuries, tumors, elderly were excluded from the study. Roland Morris Disability Questionnaire was used to check the functional disability among people having low back ache. Fear avoidance belief questionnaire was used to check the kinesiophobia among people having low back pain. An informed consent was taken first from the hospital's higher management and after that consent is taken from patients. The data from the patients was collected with RMDQ for functional disability and FABQ for kinesiophobia. Ethical approval was taken from above mentioned hospitals. Informed consent was taken from each patient participating in the study. The aim and process of the study was completely explained to every participant. Ethical approval was taken from Research Review Committee of Mayo Hospital Lahore, Jinnah Hospital Lahore, and Advance Pain Centers Lahore.

Data Analysis: The data was entered and analyzed using the SPSS software 16. Chi- square Test was used for data analysis. For categorical variables frequency and percentage was used. P value ≤ 0.05 was considered statistically significant.

RESULTS

There were a total of 138 patients with low back ache out of

DISCUSSION

The study investigated by Johan examined the fear of low back pain related to biographical, pain and distress variables. CLBP patients were involved. Result was movement of fear is associated strongly to gender because studies show that females have a lower pain tolerance level beside this it is also linked with depression.⁵ Another study investigated by Swinkels-Meewisse demonstrated the population with chronic lumbago, the dependability of TSK and FABQ. patient completed the VAS, TSK, and FABQ twice within 24 hours. It resulted that both the TSK and the FABQ are valid tools of pain-related fear.⁸ The study by Saud in 2010 investigated the functional disability belief, and the fear-avoidance belief in patients with chronic low back pain. 63 patients were involved. Result was backache causes isolation, functional disturbance and impairments.⁴

Another study by Johan conducted case cross-over study concluded fear of movement and injury. Analysis related to pre-post treatment also showed that decreases the fear of pain decreases in pain disability.⁹ Russell conducted study, to assess the psychometric properties of TSK scale, examining valid features with special focus on phobic state in patients with chronic backache. Conclusion was The TSK-GV is a reliable and effective measure for evaluating the fear of movement.¹¹ Chris conducted cohort study to examine the role of the TSK in

determining as a final outcome tool in study of backache patients. According to the study TSK scale provides no significant benefit as a diagnostic tool to predict pain, functional limitations and work outcome.¹² The study by Holmberg found the consistency and validity of the Profile Fitness Mapping questionnaire. PFM has a high specificity and sensitivity and is an accurate tool for the symptoms and functional impairments of lumbago sufferers.¹³ The study by Johan conducted case cross-over study concluded fear of movement and injury. Analysis related to pre-post treatment also showed that decreases the fear of pain decreases in pain disability.⁸ Another study by Saud to investigate the functional disability, belief, and the fearavoidance belief in CLBP patients. Result shows that the backache causes isolation functional disturbance and impairments.¹⁴ The Study conducted by Fluvial to find the association between functional disability and kinesiophobia showed that kinesiophobia was associated with disability and concluded that the higher kinesiophobia is associated with more functional disability.¹⁵ The study by Greet et al investigated 104 patients who came to rehabilitation center with chronic low back pain. This study conducted to find the association between fear related to pain and poor behavioral performance. study supports that Higher correlations found in the fear related pain and self-reported disability and behavioral performance.⁶ The present study by Sinkers in 2010 searched in a population with chronic lumbago, the dependability of TSK and FABQ. Every patient completed the VAS, TSK, and FABQ twice within 24 hours. It resulted that both the TSK and the FABQ are valid tools of pain-related fear.⁷

CONCLUSION

Kinesiophobia has a strong impact on functional disability in the patients with chronic low back ache

Contribution of Authors:

Tanveer F: Conceived idea and Manuscript writing
Shahid S: Data Collection, Statistical analysis
Hafeez MM: Data analysis and Data interpretation,

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