Original Article

Assessment of level of Kinesiophobia among chronic low back pain patients

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Objective: To assess the level of Kinesiophobia among chronic low back pain patients and its association with pain intensity.

Methodology: This descriptive cross-sectional study was carried out on 140 patients who were selected through non-probability convenient sampling. Patients of both gender who were receiving physiotherapy were included in study. Patients with trauma, neurological or pathological conditions were excluded. We used Tampa Scale to evaluate Kinesiophobia, and Numeric Pain rating scale to measure pain intensity. Data were analyzed using SPSS 22.

Results: Out of 140 patients, there were 60 (43%) males and 80 (53%) females. Age ranged between 40 – 60 years (mean 50.16 ± 5.889). The mean Kinesiophobia score was 40.13 ± 8.576 and 60.7% had high level Kinesiophobia. No association was found between pain intensity and Kinesiophobia.

Conclusion: Kinesiophobia plays an important role in explaining pain and disability among people with low back pain. Therefore, it seems appropriate to document the level of Kinesiophobia in clinical settings to acknowledge the barriers that can affect the patient's conformity towards a recovery.

Keywords: Kinesiophobia, chronic pain, low back pain, musculoskeletal.

INTRODUCTION

Pain is "a distressing sensory experience accompanying with definite or probable tissue damage".[1] In practice, 6 months is ideal as the dividing line between acute and chronic pain disorders.[2,3] Fear is the emotive response to a specific, identifiable, and immediate threat.[4] When pain is severe, it may lead to fear and safety-seeking activities.[5] Kinesiophobia, is defined as "an extreme, irrational, and incapacitating fear of physical movement and activity resulting from a feeling of susceptibility to painful injury or reinjury."[6] It is a frequently observed in chronic low backache and debility can be caused not only by pain, but also by illness beliefs and perception that pain will be increased by activity.[7] Many programs to lessen pain, fear and to enhance physical activity include training, counseling, instruction in correct ergonomics, relaxation techniques, and graded exercises.[8]

A prospective study found that patients receiving 4-weeks of physiotherapy, 6-month recovery rate was 12.6% andthose who did not recover had high-level Kinesiophobia.[9] A systematic review concluded that a greater degree of kinesiophobia predicts the progression of disability.[10] A prospective study showed that a high degree of Kinesiophobia was present in almost 79% of patients with advanced age and less physical activity.[11] Kinesiophobia is frequently overlooked in clinical settings. Therefore, it seems appropriate to document the degree of Kinesiophobia in clinical and hospital settings to acknowledge the barriers that can influence a patient's conformity towards a recovery program.

METHODOLOGY

This cross sectional descriptive study was conducted using non-probability convenience sampling. Data were collected from Arif Memorial Hospital, Hameed Latif Hospital, Jinnah Hospital, Pakistan Society for Rehabilitation of Disabled and Sheikh Zayed Hospital. The sample size was calculated using OpenEpi calculator. Both gender patients with chronic low back pain for six months with age between 40-60 years were included. Patients with any trauma, fracture, neurological problems (stroke, Parkinson's disease), and pathological conditions (infection, tumor, malignancy) were excluded. Ethics committee of Rashid Latif College of Physical Therapy approved the study and all patients signed a written informed consent.

TAMPA scale for kinesiophobia was used which is a 17-item self-report checklist using a 4-point Likert scale as a measure of fear of movement or (re)injury. Total score ranges from 17-68. A score less than 37 represent low level kinesiophobia and equal or greater than 37 represents high level kinesiophobia. Numerical Pain Rating Scale (NPRS) is a subjective measure in which individuals rate their pain on an eleven-point numerical scale. The scale is composed of 0 (no pain at all) to 10 (worst imaginable pain). Each patient was given score on the basis of questionnaire they filled.

Statistical Analysis: Data were analyzed on SPSS version 22. Pearson Chi-Square and Fisher's Exact Test were used to determine association of kinesiophobia and pain. $p < 0.05$ was considered significant.

RESULTS

Out of 140 patients, there were 60 (43%) males and 80 (53%) females. Age ranged between 40 – 60 years (mean 50.16 ± 5.889). The minimum pain intensity was 2 and the maximum intensity was 9 (mean 7.04 ± 1.94). Maximum Kinesiophobia score was 55 and a minimum 22.

The mean score was 40.13 ± 8.576; 60.7% of patients had high level of Kinesiophobia and 39.3% had low level (Fig. 1). No association was found between Kinesiophobia and pain intensity (p= 0.659) (Table 1).

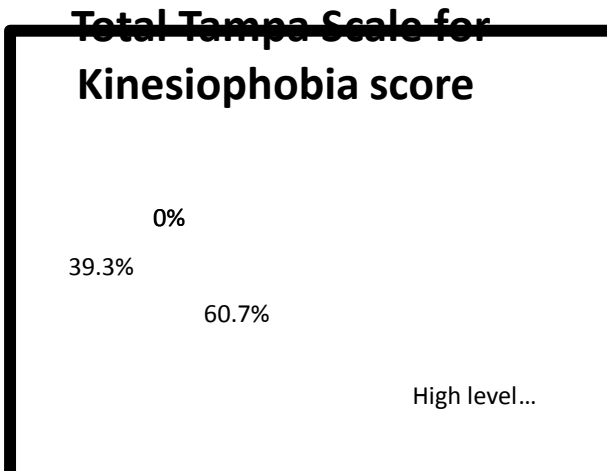

Fig. 1: Total Tempa Scale.

Table 1: Association between Kinesiophobia and pain intensity (n = 140).

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	.844[a]	2	.656	.681		
Likelihood Ratio	.835	2	.659	.710		
Fisher's Exact Test	.874			.709		
Linear-by-Linear Association	.038[b]	1	.845	.892	.473	.106

p = 0.659, showing no association between Kinesiophobia and pain intensity

DISCUSSION

We found a high level of Kinesiophobia was present among the majority of patients. Mean kinesiophobia score was 40.13 ± 8.576 and 60.7% individuals had high level Kinesiophobia. Many studies assessed kinesiophobia among age group 18 or above in both males and females and found high levels of kinesiophobia among subjects with chronic low back pain.[13,14]

Various studies showed correlation between kinesiophobia, pain catastrophizing and disability among chronic low back pain patients.[15;16] A study showed a strong association between kinesiophobia and pain intensity, with increased risk of disability and decreased quality of life.[17] Various studies showed significant association between Kinesiophobia and pain intensity while some studies showed no significant association.[18-20]

Current study showed that there was no association between Kinesiophobia and pain intensity. As Kinesiophobia is a psychological factor and depends on one's beliefs, so there was no association between Kinesiophobia and intensity of pain.This study did not cover the aspects of psychological counseling regarding Kinesiophobia and did not include factors associated with Kinesiophobia. Future studies are recommended to include psychological counseling of patients and consider Kinesiophobia in clinical settings.

CONCLUSION

Kinesiophobia plays an important role in explaining pain and disability among people with chronic low back pain. Since, this pain related fear of movement leads to behavioral avoidance, functional limitations, and may have negative impacts on outcomes of rehabilitation. Therefore, it seems appropriate to document the degree of kinesiophobia in clinical settings to recognize the obstacles that may affect patient's compliance towards a rehabilitation program.

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