

**ASSOCIATION OF KINESIOPHOBIA WITH QUALITY OF LIFE IN ELDERLY BACKACHE PATIENTS.**

Muhammad Fahad¹, Saleh Shah², Summaira Sultana³, Muhammad Umair Shaikh⁴, Zohaib Shahid⁵, Fatima Chaudhry⁶, Abdul Haseeb Bhutta⁷, Falak Hameed⁸

ABSTRACT

BACKGROUND: The study aim to determine the relationship between kinesiophobia and quality of life in older back pain patient's Kinesiophobia, is a state in which an individual has an excessive, illogical, and debilitating dread of physical movement and exercise as a result of a fear of painful injury. Fear was identified in clinical settings as a significant feature of patients' impairment that has to be addressed to have a good outcome since it impacts rehabilitation efforts. **METHODOLOGY:** This analytical study consist of 138 elderly patients with Low back pain recruited from February 2021 to August 2021 at Comprehensive Rehabilitation Center CH. Muhammad Akram Teaching & Research Hospital Lahore. Tampa Scale for Kinesiophobia (TSK) was used to examine fear of movement & the levels of pain associated fear of activity or re-injury. The QOLS scores were used to examine Quality of life. **RESULTS:** Most participants (59.9%) experienced back pain for over 3 months, with 20.3% having back pain lasting 3-6 months. A significant majority (68.8%) showed kinesiophobia. on average, participants had a moderate quality of life (QOL) score of 64.4 out of 112, and a kinesiophobia mean score of 49 out of 68. the analysis revealed a strong negative correlation (P value 0.000, R value -.983) between kinesiophobia and quality of life indicating that increased kinesiophobia is associated with a decreased in quality of life **Conclusion:** This study concluded that there is strong negative correlation between kinesiophobia and quality of life. Increasing the kinesiophobia decreases the quality of life. Hence alternate hypothesis is confirmed. **KEYWORDS:** Exercise, kinesiophobia, low back pain, quality of life

1. Superior University Lahore.
2. Superior University Lahore.
3. Superior University Lahore.
4. College of physiotherapy JPMC Karachi.
5. Superior University Lahore.
6. Superior University Lahore.
7. Ibadat International University.
8. HOD, Rehabilitation Science Stella Medical College Quetta.

Corresponding Author: Saleh shah: Superior University Lahore salehshah83@gmail.com Cell Number: 03315030364

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INTRODUCTION

Kinesiophobia is the condition of fear regarding movement/ (re)injury, one of the associated complaints with kinesiophobia is avoidance behavior resulting in hyper vigilance to bodily sensations, leading to disability, disuse and depression hence impacting quality of life. Little complaints associated with kinesiophobia are also seen in arm, neck and shoulder. ¹

LBP is very frequent in the elderly, and past research has revealed that it may create difficulties or incapacity in completing functional tasks in the elderly, resulting in diminished mobility and balance. Mobility is crucial for older people to preserve functional independence, since individuals with impaired mobility have greater rates of sickness and death, as well as a lower quality of life. Several motions, including as lumbar flexion,

extension, and rotation, have been identified as prevalent in individuals with LBP to reduce discomfort in the lower back. When some actions relieve pain, they arouse dread, and the individual prefers to avoid them. Avoiding painful lumbar joint motions over an extended period of time may limit the activity of the back and abdominal muscles, reducing their strength and control, particularly in people with LBP.^{2,3} In the investigation of low back pain (LBP) there is complexity, kinesiophobia ought to be considered alongside physical and mental viewpoints, and there are a few studies that have demonstrated the working kinesiophobia in patients with endless LBP. Be that as it may, as indicated by the author of this study, there is no study which supports the examination of the relationship amongst kinesiophobia and self-reported evaluations of handicap and physical execution in elderly patients with intense LBP.⁴⁻⁷

In this sample of kinesiophobia, the significant sign of upper limb disability in a selected client that was subjected and then counted for symptoms of psychological disturbances, and pathophysiology (diagnosis) were the kinesiophobia and the catastrophic and then it is explained that there is more than half of the variations in the kinesiophobia. Perceived partner support was not a particular and valuable factor as compared to the kinesiophobia. The constant and dominated characters of many psychological causative agents can be modified in disability recommend that multidiscipline approach that make and minimizes the concept of mind according to the way to cope strategies can be patient beneficiary.^{2,8}

Basically the aim of this study is to: find out and then define the quality of life in such patients who have suffered from this condition without any traumatic complaints to confirm that either there is any variation regarding mean score of kinesiophobia in a selected duration in those patients who are not getting a visible recovery or not; and then finally this study was done to elaborate varying factors at baseline related to kinesiophobia.¹

This research aims to investigate the correlation between kinesiophobia (fear of movement) and the quality of life in elderly individuals suffering from backache. As the elderly often face unique challenges in managing back pain, understanding how kinesiophobia influences

their physical activity and overall well-being is crucial. This study addresses a gap in existing literature and may inform targeted interventions to improve the quality of life for elderly backache patients.

METHODOLOGY

The study's c was conducted from February to August of 2021 at the Comprehensive Rehabilitation Centre CH. Muhammad Akram Teaching & Research Hospital in Lahore. Following a lengthy review process, the research was granted permission to begin the around 6-month study period. We used an associational study design, which provides a strong framework for examining interactions and correlations, to uncover complex relationships between variables.

Raosoft technique was used to select 138 volunteers from a demographic pool of 2000 individuals

The sample was meticulously calculated. The goal of this method was to produce results that were statistically significant at the 95% confidence and 5% accuracy level. It was easier to find persons who meet the desired demographic thanks to our useful Non probability sampling technique.

When creating our inclusion criteria, we took great effort to ensure that people with low back pain who had lasted for at least one month, people who were willing to actively engage in the study, and people of both genders over 65 were substantially represented. On the other hand, those having a history of back surgery, radiating back pain, or recent trauma were excluded to reduce the possibility of confounding variables.

This strict and cautious approach helped create the groundwork for a complete analysis of the study's objectives in a well-defined demographic framework, which allowed us to ensure the validity, consistency, and application of our findings.

For the statistical analysis, SPSS version 27 had been used. Standard statistical tests were used to assess the data. The Chi-square test was used to compare the first-attempt success rate and the total success rate. The number of tries in each group was compared using the Independent t-test for normally distributed variables and the Mann-Whitney U test for non-normally distributed variables. When a p value of 0.05 was reached, statistical significance was evaluated.

RESULTS

A total of 138 patients with low back pain were included in the study. The majority of patients were male (56.5%) and had acute pain (79.7%). The mean age of the patients was 69.47 years (SD = 2.94). Using the Tampa questionnaire, kinesiophobia—a dread of movement brought on by pain—was identified in 98 patients (71.0%). These results imply that kinesiophobia affects many people with low back discomfort. Avoiding movement and exercise can result from kinesiophobia, which can make pain and impairment worse. Thus, it's critical to screen for kinesiophobia in low back pain patients and offer appropriate treatment,

like cognitive-behavioral therapy, to address this problem.

Table 1: Demographic Details

Variable	Mean ±SD	
Age	69.47±2.94	
Gender	Male	78(56.5%)
	Female	60(43.5%)
Back pain Duration	Less than 3 month	28(20.3%)
	More than 3 month	82(59.4%)
	More than 6 month	28(20.3%)

Table 2: Showing QOL vs Kinesiophobia Cross-tabulation

QOL vs Kinesiophobia Cross-tabulation						
			Category		Spearmen	P-value
			kinesiophobia	No kinesiophobia		
QOL	EXCELENT QOL	Count	0	43 (100%)	-0.86	<0.0001
		Mean ±		91.3±6.6		
	GOOD QOL	Count	6(27.3%)	16(72.7%)		
		Mean ±	68.33±1.86	73.8 ± 3.2		
	MODERATE QOL	Count	33(100%)	0		
		Mean ±	56.1± 4.8	0.0%		
	FAIR QOL	Count	32(100%)	0		
		Mean ±	38.1 ± 4.7			
	POOR QOL	Count	8(100%)	0		
		Mean ±	27.3 ±3.3	0.0%		

Quality of life (QOL) and kinesiophobia have a strong and statistically significant negative correlation, according to the cross-tabulation study. A distribution was seen among those with kinesiophobia; 27.3% reported good QOL and the remaining 72.7% reported excellent QOL. Among those without kinesiophobia, 100% expressed excellent QOL.

Importantly, no instances of moderate, fair, or poor QOL were reported among individuals with kinesiophobia. The mean QOL scores reinforce these findings, as those without kinesiophobia had a notably higher mean QOL score (91.3) compared to individuals with kinesiophobia (68.33 for good QOL and 56.1 for moderate QOL). The Spearman correlation coefficient of -0.86 underscores a robust negative correlation, indicating that as kinesiophobia increases, QOL tends to decrease significantly (p < 0.0001). This comprehensive analysis underscores the impactful relationship

between kinesiophobia and the perceived quality of life among the study participants.

DISCUSSION

Kinesiophobia, often known as "fear of movement," first emerged as a condition in which a person is excessively, illogically, and incapacitatingly nervous about moving around and exercising because they are afraid of hurting themselves or getting hurt again. In clinical settings, fear was identified as a significant factor in patients' inability that must be addressed to ensure a positive outcome because it alters rehabilitation efforts. In our review principal discoveries were 56.5% were male and 43.5% were female members. The median age found 69 years with SD±2.9. Majority were found having back pain for more than 3 months (59.4%), 20.3% were having less than 3 months and more than 6 months of back pain. Majority of the participants were found

having kinesiophobia on Tampa Scale for Kinesiophobia (68.8%).^{9,10}

In earlier research, 387 elderly people were questioned, with 77% of them being ladies and a mean time of 71.98 (7.70). The prevalence of LBP was 76.23%, with a punctual prevalence of 72.54 percent and a 12-month prevalence of 93.22 percent. The RMDQ-BRA score was 11.32 (5.35), the NPRS score was 7.52 (2.16), and the TSK score was 43.78 (7.50).. According to preliminary statistics, this population has a significant frequency of LBP and kinesiophobia. The level of functional handicap caused, on the other hand, is moderate. There has been little study on kinesiophobia in women suffering from back pain.¹¹ There are few studies that look at these symptoms in the senior population and use them to develop health strategies.^{8,12}

In present study Mean QOL score was found 64.4 out of total 112 with $SD \pm 23.5$. Higher score indicates higher quality of life. Mean Kinesiophobia score was found 49 out of total 68 with $SD \pm 14.8$. Higher score indicates higher kinesiophobia. P value indicates that there is non-significant difference of quality of life and kinesiophobia between male and female participants. P value indicates that there is no association of kinesiophobia with gender of the population. There is no association of kinesiophobia with duration of back pain among population. (P value .829). During pregnancy, women had LBP and feelings of incapacity. They showed increased muscular activity during flexion during delivery, indicating that flexion relaxation was disrupted.^{13, 14, 15}

Previously, it was discovered that obese individuals had higher Tampa Scale of Kinesiophobia (TSK) ratings than patients who were not obese (26.2 7.5 vs. 23.9 x 6.8 (P = 0.032) Compared to non-obese patients, obese individuals reported physical and mental sub scores that were 6-10% lower. Stout people had higher Oswestry overview scores (40.6 versus 31.6 focuses; P 0.001). TSK scores, however not adaptability, were connected with self-report limit in strolling and the Oswestry handicap score (both P 0.001). Torment related fear of portability further developed expectation of self-detailed debilitation with strolling and generally speaking Oswestry scores in large people with constant lumbar agony.^{16, 17}

In our study it was found that there is strong negative correlation between kinesiophobia and quality of life (P value 0.000, R value -.983). Increasing the kinesiophobia cause different back pain pattern decreases the quality of life and reduced health-related quality.^{18, 19} this study concluded that there is strong negative correlation between kinesiophobia and quality of life. Increasing the kinesiophobia decreases the quality of life.^{20, 21}

Another research discovered no significant connections between kinesiophobia, pain, and muscular function (all $p > 0.05$). Mobility and balance were substantially linked with kinesiophobia ($p = 0.038$, $r = 0.263$). Kinesiophobia was found to be a significant predictor of mobility and balance ($p = 0.038$) in regression analyses. Its came to the conclusion that kinesiophobia predicted mobility and balance in older people with LBP.

Some research has found statistically significant associations between kinesiophobia and pain intensity ($r = 0.187$), quality of pain, high disease activity (sensory, $r = 0.266$; affective, $r = 0.174$; and total $r = 0.275$), disability ($r = 0.399$), and physical quality of life (emotional $r = 0.414$). In individuals with persistent low back pain, kinesiophobia is an essential outcome to examine. The findings indicate that there are statistically significant relationships between disability, kinesiophobia, and quality of life. 22-24 With a Visual Analog Scale score of 6.72 in the low back pain group and 6.82 in the neck pain group, the literature indicates that the severity of pain was comparable in both groups. In the low back torment bunch, Nottingham Wellbeing Profile torment [$z=4.132$] and actual work scores [$z=5.640$] were significantly higher. The low back pain group had significantly higher levels of kinesiophobia, with a mean score of 42.055.91 on the Tampa Scale for Kinesiophobia versus 39.76.0 [$z=4.732$]. Notwithstanding torment seriousness, patients with low back torment obtained more extreme kinesiophobia, as well as higher agony insight and lower active work levels.^{25, 26}

CONCLUSION

This study concluded that there is strong negative correlation between kinesiophobia and quality of life. Increasing the kinesiophobia decreases the quality of life. Hence alternate hypothesis is confirmed.

ETHICAL CONSIDERATIONS:

Ethical approval was taken from all the participants taking part in this study. Questionnaires were only administered to the willing participant with their informed consent. The identity of the respondent was kept confidential in order to get clear and appropriate data.

ETHICS APPROVAL: The ERC gave ethical review approval.

CONSENT TO PARTICIPATE: written and verbal consent was taken from subjects and next of kin.

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AUTHORS' CONTRIBUTIONS:

All persons who meet authorship criteria are listed as authors, and all authors certify that they have participated in the work to take public responsibility of this manuscript. All authors read and approved the final manuscript.

CONFLICT OF INTEREST: No competing interest declared

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