VOLUME-7, ISSUE-11, NOVEMBER-2018 • PRINT ISSN No 2277 - 8160

Original Research Paper

Physiotherapy

PREVALENCE OF KINESIOPHOBIA AMONG THE TENNIS ELBOW PATIENTS IN INDIA

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ABSTRACT

BACKGROUND: Physiotherapy is the essence which is widely used to treat musculoskeletal pain. One of the common conditions which currently prevail around globe is Tennis Elbow or lateral epicondylitis. It was interesting to evaluate the attitude of the patients towards the physiotherapy modules prescribed to them.

METHODOLOGY: The subjects were enrolled from Physiotherapy centres and hospitals. The common inclusion criteria were subjects in the age group between 25-40 years having musculoskeletal pain. The subjects were community dwelling populace and the study limited to this inclusion in order to have uniformity in the study. Non co-operative subjects were excluded from the study. Initially, 57 subjects were included, among which 5 subjects were excluded due to unavailability of reliable reports.

RESULTS: Among 52 subjects, 21 subjects scored 59.6(mean) in their Kinesiophobia evaluation using Tampa scale. These values suggest that Kinesiophobia can be present in any form of musculoskeletal disorders such as tennis elbow.

CONCLUSION: Various cradles of attributes pointed out towards the importance of Tampa scale in determining kinesiophobia and its reliability in various musculoskeletal disorders.

KEYWORDS : Kinesiophobia, Tennis elbow, Tampa scale, fear of movements, re-injury.

INTRODUCTION:

Physiotherapy is the essence which is widely used to treat musculoskeletal pain. One of the common conditions which currently prevail around globe is Tennis Elbow or lateral epicondylitis. It was interesting to evaluate the attitude of the patients towards the physiotherapy modules prescribed to them[1,2]. The study aimed to evaluate Kinesiophobia among the Tennis Elbow Patients who underwent physiotherapy.

Tennis elbow, also called as lateral epicondylitis, is a painful condition of the elbow caused by overuse. Playing tennis or other similar racquet sports can cause this condition. However, several other sports and activities are also at high risk. Tennis elbow is an inflammation of the tendons that join the forearm musculatures on the outside part of the elbow. The forearm muscles and tendons undergo mild to moderate damage from overuse — repeating the same movements again and again[4, 5, 6]. This leads to pain and tenderness over the lateral side of the elbow.

Recent studies show that tennis elbow is due to damage to a specific forearm muscle. The extensor carpi radialis brevis (ECRB) tendon helps stabilize the wrist when the elbow is straight. When the ECRB is weakened from overuse, microscopic tears occur in the tendon where it attaches to the lateral epicondyle. This leads to pain and inflammatory charges.

The ECRB tendon may also be at increased risk for damage due of its position. As the elbow bends and straightens, the muscle rubs against bony prominences. This can lead to gradual wear and tear of the muscle over time. Athletes are not the only populace who get tennis elbow. Many people with tennis elbow also participate in work or recreational activities that require repetitive and vigorous use of the forearm muscle. Painters, plumbers, and carpenters are also prone to developing tennis elbow. Studies have shown that auto workers, cooks, and even butchers tend to suffer from tennis elbow more often than the rest of the population. It is thought that the repetition and weight lifting required in these occupations leads to injury[7]. The symptoms are often worsened with forearm activity, such as holding a racquet, turning a wrench, or shaking hands. The dominant arm is most often affected; however both arms can be affected.

The recent concept of fear of movement, called Kinesiophobia been developed in musculoskeletal pain. Fear avoidance, and ear of movement are important determinants of chronic pain. Several authors have proposed a questionnaire in order to diagnose kinesiophobia: the Tampa Scale of Kinesiophobia (TSK) [8]. It was mainly addressed to adult either acute or chronic ache patients, but also in other musculoskeletal pain conditions. The Tampa Scale of Kinesiophobia assesses fear of movements, re-injury and has invariance across different clinical conditions and patient populations[9, 10]. Each survey question is provided with a 4-point Likert scale with scoring alternatives ranging from "strongly disagree" to "strongly agree". The TSK consists of psychometric, clinically-oriented diagnostic, prognostic and monitoring tool[11,12].

METHODOLOGY:

Participants: The subjects were enrolled from Physiotherapy centres and hospitals. The common inclusion criteria were subjects in the age group between 25-40 years having musculoskeletal pain. The subjects were community dwelling populace and the study limited to this inclusion in order to have uniformity in the study. Non co-operative subjects were excluded from the study. Initially, 57 subjects were included, among which 5 subjects were excluded due to unavailability of reliable reports.

Procedure: The subjects were thoroughly explained about the 17 point Likert scale and the meaning of each response. Each subject was individually examined using the Tampa scale of Kinesiophobia. Most of the subjects were quite responsive and specific in their responses. Few of the subjects were all over the sea and due to which their responses were discarded.

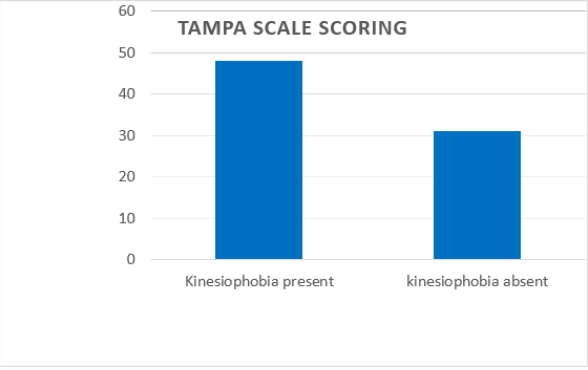
Outcome measures: The TSK is a 17-item self report checklist using a 4-point Likert scale that was developed as a measure of fear of movement or (re)injury. Kinesiophobia is defined by the developers as "an irrational and debilitating fear of physical movement and activity resulting from a feeling of vulnerability to painful injury or re-injury" (Kori et al., 1990). The scale is based on the model of fear avoidance, fear of work related activities, fear of movement and fear of re-injury (Vlaeyan et al., 1995). The TSK has also been linked to elements of catastrophic thinking (Burwinkle et al., 2005). The scale

can be useful in measuring unhelpful thoughts and beliefs about pain in people with chronic pain or fibromyalgia. Results consist of a total raw score and two subscale scores. Additionally, scores are presented in percentile terms in comparison to patients with chronic back pain (CBP Percentile) and Fibromyalgia (FM Percentile) using data from Roelofs et al (2004). Thus, a percentile of 50 compared to the Fibromyalgia sample represents an average level of kinesiophobia compared to others with Fibromyalgia[13].The total score ranges between 17 and 68. A high value on the TSK indicates a high degree of kinesiophobia, and a cutoff score was developed by Vlaeyen (1995), where a score of 37 or over is considered as a high score, while scores below that are considered as low[14,15].

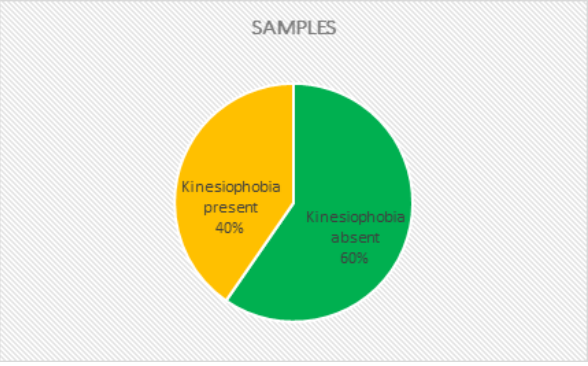
DATA ANALYSIS: All the Tampa scale scores were recorded and analysed statistically using Microsoft Excel 2013. Highest and lowest individual scores were 59 and 21 respectively. Mean and standard deviation were calculated using descriptive statistics and P values were obtained by using Student T Test assuming unequal variances. The percentage of kinesiophobic subjects was 40.3% while that of non kinesiophobic subjects was 59.6%. On analysing statistically, the values obtained were statistically significant (p 0.0001).

Table1: Represents various attributes of the reports obtained

Total No of samples	57
No of subjects excluded	5
No of subjects who scored above 37 in Tampa scale	21
Mean scores and SD of subjects who scored above 37 in Tampa scale (kinesiophobic)	48.1 ±5.8
No of subjects who scored less than 37 in Tampa scale	31
Mean scores and SD of subjects who scored below 37 in Tampa scale	31.1 ±4.54
Highest individual Tampa scale score	59
Lowest individual Tampa scale score	21



Graph1: Represents the mean scores of the subjects in Tampa scale



Graph2: Represents the percentage of scores of the subjects

RESULTS:
Among 52 subjects, 21 subjects scored 59.6(mean) in their Kinesiophobia evaluation using Tampa scale. These values suggest that Kinesiophobia can be present in any form in any musculoskeletal disorders such as tennis elbow. As per the interpretation of the scale, greater the score, the greater will be the fear to perform movements or a greater chance of re-injury.

DISCUSSION:
Kinesiophobia is an entity which tends to restrict the normal daily activities of the community during populace. The subjects involved in this study were community dwelling people and had a significant fear to perform their normal activities. It was interesting to notice the fact that in spite of fear of re injury, few of the subjects were quite comfortable with their normal living. During the course of the procedure, few subjects were quite confident regarding their preferences in the Tampa scale.

Initially there were 57 subjects enrolled in the study. Among them, five subjects were excluded due to several reasons. One of which was their preferences were not certain and they were disoriented towards the procedure. The scores obtained were quite staggering and the attitude of the subjects towards the questionnaire was interesting to look upon.

Apart from sports population, community dwelling people were also considered as a great risk for tennis elbow and it's re injury concerns. Among 52 finalized samples, 17 subjects were housewives and surprisingly their scores were high in the Tampa scale scoring. This opens up a new dimension of research that housewives suffering from tennis elbow were at a greater risk of re injury.

CONCLUSION:
Various cradles of attributes pointed out towards the importance of Tampa scale in determining kinesiophobia and its reliability in various musculoskeletal disorders. The prevalence of kinesiophobia would have a detrimental effect during the process of rehabilitation of subjects with musculoskeletal disorders.

REFERENCES:

1. Turk DC, Okifuji A. Assessment of patients' reporting of pain: an integrated perspective. Lancet 1999; 353:1784–8.
2. Vlaeyen JWS, Linton SJ. Fear-avoidance and its consequences in chronic musculoskeletal pain: a state of the art. Pain 2000;85:317–32
3. Vlaeyen JWS, Kole-Snijders AMJ, Rotteveel AM, et al. The role of fear of movement/(re)injury in pain disability. J Occup Rehabil 1995; 5:235–52.
4. Picavet HSJ. National health interview surveys by mail or home interview: effects on response. J Epidemiol Community Health 2001; 55:408–13.
5. Badley EM, Webster GK, Rasooly I. The impact of musculoskeletal disorders in the population: are they just aches and pains? Findings from the 1990 Ontario Health Survey. J Rheumatol 1994; 21:505–14.
6. Picavet HSJ, van den Bos GAM. The contribution of six chronic conditions to the total burden of mobility disability in the Dutch population. Am J Public Health 1997; 87:1680–2.
7. Crombez G, Eccleston C, Baeyens F, Van Houdenhove B, Van den Broeck A. Attention to chronic pain is dependent upon pain-related fear. J Psychosom Res 1999a; 47:403–10.
8. Crombez G, Vlaeyen JWS, Heuts PHTG, Lysens R. Pain-related fear is more disabling than pain itself: evidence on the role of pain-related fear in chronic back pain disability. Pain 1999b; 80:329–39.
9. Eccleston C, Crombez G, Aldrich S, Stannard C. Attention and somatic awareness in chronic pain. Pain 1997; 72:209–15.
10. Geisser ME, Hang AJ, Theisen ME. Activity avoidance and function in persons with chronic back pain. J Occup Rehab 2000; 10(3):215–27.
11. Goubert L, Crombez G, Van Damme S, Vlaeyen JWS, Bijttebier P, Roelofs J. Confirmatory factor analysis of the Tampa Scale for Kinesiophobia: invariant two-factor model across low back pain patients and fibromyalgia patients. Clin. J. Pain., in press. Joreskog orbom D. LISREL 8.30. Chicago IL: Scientific € Software International Inc. 1999.
12. Riley JF, Ahern DK, Follick MJ. Chronic pain and functional impairment: assessing beliefs about their relationship. Arch Phys Med Rehab 1996; 69:579–82.
13. Salen BA, Spanfort EV, Nygren AL, Nordemar R. The Disability Rating Index: an instrument for the assessment of disability in clinical settings. J Clin Epidemiol 1994; 47(12):1423–34.
14. Philips C, Jahanshahi M 1986 The components of pain behavior report. Behaviour research and therapy 24:117125.
15. Philips HC 1987 Avoidance behaviour and its role in sustaining chronic pain. Behaviour research and therapy 25: 273279.