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Original article

Fear-avoidance beliefs increase perception of pain and disability in Mexicans with chronic low back pain

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ABSTRACT

Background: Fear-avoidance beliefs are related to the prognosis of chronicity in low back pain in subacute stages, however in chronic pain, is no clear the influence of these factors; it has been suggested that the study population can determine the magnitude of influence on disability and pain of those suffering from back pain. Currently, information does not exist in the Mexican population.

Objective: To analyze the relationship between fear-avoidance beliefs with pain and disability in Mexicans with chronic low back pain; analyze potentials differences between subgroups according to the time of evolution.

Methods: Cross-sectional study in Mexicans with chronic LBP aged between 18 and 45. Data were collected on general socio demographic characteristics, time of evolution, body mass index, pain, disability and fear-avoidance beliefs.

Results: 33 men and 47 women, with an average age of 34.19 ± 7.65 years. Higher scores of fear-avoidance beliefs were obtained in women (47.2 ± 20.99 versus 38.5 ± 9.7 ; $p = 0.05$) and single participants ($p = 0.04$). A positive correlation was found between disability ($r = 0.603$, $p < 0.001$) and pain ($r = 0.234$, $p = 0.03$) with high scores of fear-avoidance beliefs. Through generalized linear models for disability, total score of the fear avoidance beliefs questionnaire showed a standardized beta coefficient of 0.603, $p < 0.001$ (R^2 of 0.656); for pain showed a standardized beta coefficient of 0.29, $p = 0.01$ (R^2 of 0.721).

Conclusion: The present study suggests that there is a strong relationship between pain severity, FABQ scores, and functional disability in Mexicans with chronic LBP.

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Crenças de medo e evitação aumentam a percepção de dor e incapacidade em mexicanos com lombalgia crônica

R E S U M O

Palavras-chave:

Crenças de medo e evitação

Lombalgia crônica

Incapacidade

Introdução: As crenças de medo e evitação estão relacionadas com o prognóstico da cronicidade da lombalgia nas fases subagudas; contudo, na dor crônica, não é clara a influência desses fatores. Sugeriu-se que um estudo populacional pode determinar a magnitude da influência da lombalgia sobre a incapacidade e a dor. Atualmente não há informação a esse respeito na população mexicana.

Objetivo: Analisar a relação entre as crenças de medo e evitação com a dor e incapacidade em mexicanos com lombalgia crônica; analisar potenciais diferenças entre subgrupos determinados pelo tempo de evolução.

Métodos: Estudo transversal em mexicanos com lombalgia crônica entre 18 e 45 anos. Coletaram-se dados sobre características sociodemográficas gerais, tempo de evolução, índice de massa corporal, dor, incapacidade e crenças de medo e evitação.

Resultados: Foram estudados 33 homens e 47 mulheres com média de $34,19 \pm 7,65$ anos. Obtiveram-se escores de crenças de medo e evitação mais elevados em participantes do sexo feminino ($47,2 \pm 20,99$ versus $38,5 \pm 9,7$; $p = 0,05$) e solteiros ($p = 0,04$). Encontrou-se uma correlação positiva entre a incapacidade ($r = 0,603$, $p < 0,001$) e a dor ($r = 0,234$, $p = 0,03$), com altas pontuações de crenças de medo e evitação. Por meio de modelos lineares generalizados para incapacidade, a pontuação total no questionário de crenças de medo e evitação mostrou um coeficiente beta padronizado de $0,603$, $p < 0,001$ (R^2 de $0,656$); para a dor, mostrou um coeficiente beta padronizado de $0,29$, $p = 0,01$ (R^2 de $0,721$).

Conclusão: O presente estudo sugere que há uma forte relação entre a intensidade da dor, os escores no FABQ e a incapacidade funcional em mexicanos com lombalgia crônica.

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Introduction

Promoting gradual physical reactivation and avoiding rest are recommended in the management of low back pain (LBP).¹ However, these recommendations may not be carried out by individuals if they possess erroneous beliefs, attitudes of avoidance, or fear of physical activity. These people may generate catastrophic ideation about potential damage, which in turn increases incapacity and pain and interferes with clinical course and treatment adherence.²

Through the development and administration of the "Fear Avoidance Beliefs Questionnaire" (FABQ), data has been obtained that support the "Fear-Avoidance Model", previously described by Vlaeyen and Linton, which explains how the presence of fear and/or avoidance beliefs to physical activity, are related to the prognosis of chronicity in people with LBP in subacute stages (between 6 and 12 weeks of evolution); a finding initially detected in salaried workers.^{3,4}

In the case of people with chronic LBP (symptoms lasting longer than 12 weeks) the findings are less consistent. It is for this reason that there is a current controversy surrounding the influence of these factors on the perception of pain and long-term associated disability. Additionally, it is recommendable to analyze the impact of these factors with other variables such as time of evolution, taking into account peoples' status before and after 6 months of symptom duration, and type of work, since people with a non-salaried occupation have been underrepresented in this area of research.⁵

On the other hand, the origins of study population could determine the magnitude of influence of fear-avoidance beliefs on disability and quality of life of those suffering from LBP; it has been observed that the influence of these factors is lower in populations from southeast Europe when compared to populations from northern Europe.^{6,7}

In Mexico, in 2012, a study was reported that aimed to compare the personality types of 46 Mexicans with chronic LBP against asymptomatic controls using the Temperament and Character Inventory (TCI). It was found that scores on this scale supported the "Fear-Avoidance Model". However, this study included participants in subacute stages and did not analyze the association between functionality and pain. It also did not analyze the influence of the results against previously described fear and avoidance models.⁸

Currently, information does not exist regarding these factors in the Mexican population. This is why the research questions for this study were: Which is the relationship between fear-avoidance beliefs with pain and disability in Mexicans with chronic low back pain? and Are there differences between subgroups when they are divided according to the time of evolution and occupation?

Material and methods

A cross-sectional study was performed in the outpatient services of the Spine Rehabilitation Services of the National Institute of Rehabilitation in Mexico City. The participants were recruited based on the following criteria: Mexicans of

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