Profile, attitudes and beliefs of physiotherapists in the management of chronic nonspecific low back pain

Perfil, atitudes e crenças de fisioterapeutas no manejo da dor lombar crônica inespecífica

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Abstract

Introduction: About 84% of the population have had some low back symptom during their lifetime; where 23% of cases become chronic pain. It is observed that in around 85% of cases of chronic low back pain, there is no specific cause or diagnosis, where it is referred to as chronic nonspecific low back pain. Given its disabling potential, the comprehensive assessment, attitudes and beliefs of the physiotherapist in clinical management become essential to the prognosis. **Objective:** To evaluate the relationship between sociodemographic/socioeducational and work profile and the attitudes and beliefs of physiotherapists in the management of chronic nonspecific low back pain treatment. **Methods:** This was a cross-sectional quantitative study. For data collection, two questionnaires were used, one referring to the sociodemographic/socioeducational profile information and the other referring to attitudes and beliefs determined by the Pain Attitudes and Beliefs Scale for Physiotherapists. Data were analyzed using the BioEstat 5.0 program using descriptive statistics, t-test and Pearson correlation (p < 0.05). **Results:** Fifty-seven physical therapists were analyzed, where most were women (61.4%), had specialization (56.2%), worked in private clinics (63.2%) and used specific methods in the management of chronic nonspecific low back pain (84.2%). Biomedical belief was predominant (70.2%) and showed a significant relationship with age (p = 0.0006). **Conclusion:** The biomedical model is still predominantly used, which is related to the age of the professionals surveyed.

Keywords: Backache. Health attitudes and practice. Physiotherapists.

Resumo

Introdução: *Cerca de 84% da população já teve algum sintoma lombar durante a vida e em 23% destes a dor tornou-se crônica. Observa-se que cerca de 85% das dores lombares crônicas não possuem causa ou diagnóstico específico, sendo denominadas de dor lombar crônica inespecífica (DLCI). Visto o seu potencial incapacitante, a avaliação integral, atitudes e crenças do fisioterapeuta no manejo clínico tornam-se fundamentais para o prognóstico.* **Objetivo:** *Testar a relação entre o perfil sociodemográfico/socioeducacional e laboral e as atitudes e crenças de fisioterapeutas no manejo do tratamento da DLCI.* **Métodos:** *Trata-se de uma pesquisa transversal e quantitativa. Para a coleta de dados foram utilizados dois questionários, um referente às informações de perfil sociodemográfico/socioeducacional e outro inerente às atitudes e crenças determinadas pelo Pain Attitudes and Beliefs Scale for Physiotherapists. Os dados foram analisados pelo programa BioEstat 5.0, utilizando estatística descritiva, teste t e correlação de Pearson (p < 0,05).* **Resultados:** *Dos 57 fisioterapeutas analisados, a maioria eram mulheres (61,4%), possuíam especialização (56,2%), atuavam em clínicas privadas (63,2%) e utilizavam métodos específicos no manejo da DLCI (84,2%). A crença biomédica mostrou-se predominante (70,2%) e apresentou relação significativa com a idade (p = 0,0006).* **Conclusão:** *Ainda é predominantemente empregado o modelo biomédico, que apresenta relação com a idade dos profissionais pesquisados.*

Palavras-chave: Dor lombar. Atitudes e prática em saúde. Fisioterapeutas.

Introduction

Low back pain is a musculoskeletal disorder that can be caused by several factors and that has a high incidence worldwide, and therefore, it is considered a public health problem. About 84% of the population has some low back symptom during their lifetime. In 23% of these cases, the pain becomes chronic; that is, it persists for more than 12 weeks. In addition, it is observed that around 85% of chronic low back pain does not have a specific cause or diagnosis, being called chronic nonspecific low back pain (CNLP).[1]

Clinically, CNLP is associated with some biome-chanical disorder[2] or with lifestyle-related conditions,

factors that must be considered in the initial evaluation of the patient, since the diagnosis is based on clinical history and physical examination.[3]

Given the disabling potential, comprehensive assessment becomes essential for appropriate decision-making, which will have repercussions on the prognosis;[4] however, there are still gaps in the therapeutic definition, making CNLP one of the main causes of disability.[5]

Several studies point to therapeutic hypotheses for CNLP, with consensual conservative treatment being the most indicated. However, physiotherapy as a rehabilitation modality has several methods that seek to alleviate pain and improve functional capacity and quality of life, including acupuncture, hydrotherapy, electrotherapy, pilates, global postural re-education (GPR), Maitland, segmental stabilization and therapeutic exercises.[6,7]

Treatment prognosis is variable and significantly dependent on the beliefs of both the patient and the physiotherapist. Some patients associate movement with aggravation of pain, believing that there is a greater risk of persisting symptoms and higher levels of disability, thus adopting several restrictions without support and guidance. It is noteworthy, however, that the cultural and environmental context is increasingly recognized as essential for the perception and expression of pain.[8]

Identity and therapeutic belief are fundamental, as they can show two different attitudes. The first follows a biomedical model based on the theory that pain derives exclusively from structural and/or functional changes in the spine in adjacent areas. In this model, pain is considered indicative of tissue damage and physical therapy treatment is essentially aimed at compromised anatomical structures. The second attitude is one that follows a behavioral model in which pain is explained not only by tissue damage but also by psychological, environmental and social factors.[9,10]

Behavioral dimensions are often omitted in practical application and less investigated compared to biological dimensions. However, there is evidence that promoting a culturally safe environment, with ethnocultural attention, identification and observation of social factors, can confer an advantage or disadvantage to an individual's pain management.[10]

Based on these assumptions, the aim of this was to test the relationship between the sociodemographic/socioeducational and work profile and the attitudes and beliefs of physiotherapists in the management of the treatment of CNLP.

Methods

A cross-sectional quantitative-analytical study was conducted.[11,12] As part of an umbrella project, the study was approved by the Ethics Committee for Research in Humans (Approval No. 2.868.723).

The sample size calculation was based on correlation coefficients through a pilot study with the first five individuals who participated in the study. Considering the test power of 0.90 and alpha level of 0.05 with a coefficient of -0.4167 found between the behavioral profile and the time of professional experience, the required sample was 57 individuals.

Elegibility criteria

Physiotherapists with a bachelor's degree were included in the study, with specialization *sensu lato* or *sensu stricto*, regardless of training time, and who worked directly in the treatment of patients with CNLP. Incomplete questionnaires with or without divergent information were excluded.

Instruments

Two questionnaires were used for data collection, one containing sociodemographic/socioeducational information and professional profile, and the Pain Attitudes and Beliefs Scale for Physiotherapists (PABS-PT) to assess the role of physiotherapists' attitudes and beliefs in the clinical approach to the patient with chronic low back pain.

The PABS-PT is a self-administered questionnaire, with no cutoff point and no right or wrong answers. Through the 6-point Likert Scale (from 0 to 5 points), two guidelines that the physiotherapist follows for the management of CNLP are identifiable: biomedical, through items 1-10, where the profile score ranges from 0 to 50; and behavioral, through items 11-19, with score ranging from 0 to 45.[13]

To classify the professionals in each of the profiles, the average value of the questions in each scale was determined; the mean value of the behavioral scale minus the mean value of the biomedical scale was obtained, generating positive and negative differences. Thus, a positive difference classified the professional as biomedical and a negative difference as behavioral.[13,14]

Procedures and data analysis

Data collection was carried out from May to August 2020. Participants were invited through social networks and asked about their professional work with patients with CNLP. Those who reported having contact were sent the questionnaire using Google Forms.

The questionnaire was divided into two parts so that the first dealt with the presentation of the objective of the study, followed by an informed consent form, allowing access to the questions only to those who agreed with the study proposal. After agreeing with the terms, the participants were directed to questionnaires of sociodemographic/socioeducational profile and PABS-PT. After the quesionnaires were filled out, the responses were sent electronically to form the database.

Data were tabulated using Microsoft Excel 2013 software and then analyzed with the BioEstat 5.0 program, using descriptive statistics, t-test and Pearson's correlation, adopting a significance level of 5% ($p < 0.05$).

Results

Of the 65 completed questionnaires, five were excluded because they were incomplete and three because of divergence of information. Thus, the total sample consisted of 57 physical therapists from five regions of Brazil, most of them from the Northeast, followed by the Southeast and Central-West. Most respondents were women and aged predominantly between 20 and 29 years. As for the degree, the sample consisted mostly of specialists, followed by those with a bachelor's, master's or doctorate. Regarding the workplace, 63.2% of the participants worked in private clinics, 14% in public clinics/SUS and 15,8% with home care. Of those analyzed, 84.2% used specific methods for the treatment of CNLP (Table 1).

Forty-eight of the 57 physiotherapists analyzed used specific methods for the treatment of CNLP, where the main method used for the treatment of CNLP was pilates (29.2%), that followed by McKenzie (14.5%), osteopathy (10,4%), GPR (8.3%) and manual therapy (4.1%). When analyzing the use of combined methods, it was observed that manual therapy used with GPR was the most present (4.1%); the others had a homogeneous distribution.

Table 1 - Characterization of physiotherapists participating in the study (n = 57)

Variables	Fi[a]	Fk[b]	hi[c]	Hi[d]
Region				
North	3	3	5.3	5.3
Northeast	34	37	59.6	64.9
South	2	39	3.5	68.4
Southeast	14	53	24.6	93.0
Central-West	4	57	7.0	100.0
Sex				
Female	35	35	61.4	61.4
Male	22	57	38.4	100.0
Age				
20 - 29 years	24	24	42.1	42.1
30 - 39 years	23	47	40.4	82.5
40 - 49 years	6	53	10.5	93.0
≥ 50 years	4	57	7.0	100.0
Highest degree				
Bachlor's	18	18	31.7	31.7
Specialist	32	50	56.2	87.9
Master's	4	54	7.0	94.9
Ph.D.	3	57	5.1	100.0
Place of work				
Private clinic	36	36	63.2	63.2
Public clinic/SUS	8	44	14.0	77.2
Home care	9	53	15.8	93.0
Others	4	57	7.0	100.0
Specífic methods				
Yes	48	48	84.2	84.2
No	9	57	15.8	100.0

Note: [a]Absolute frequency. [b]Cumulative absolute frequency. [c]Relative frequency. [d]Cumulative relative frequency. SUS = Sistema Único de Saúde (Brazilian National Health System).

According to the profile of attitudes and beliefs of the physiotherapists surveyed, 70.2% had a biomedical model and 29.8% had a behavioral model (Table 2), pointing out that the management of CNLP aimed at the biomedical model is still prevalent.

Table 2 - Profile of physiotherapists' attitudes and beliefs in the management of low back pain

Profile of physiotherapists	Absolute frequency	Relative frequency (%)
Biomedical	40	70.2
Behavioral	17	29.8
Total	57	100.0

In the biomedical model, age showed a significant relationship with the profile of attitudes and beliefs of physical therapists in the management of low back pain (p = 0.0006). With regard to training time, no significant correlation was identified (p = 0.5132). In the analysis of the behavioral model, age (p = 0.0928) and time since graduation (p = 0.6242) showed no significant correlation, indicating that the prediction for the behavioral model is independent of these variables; however, age influences the prediction of the biomedical model (Table 3).

When comparing the profile of attitudes and beliefs with gender, level of education and workplace, it was noticed that there is no difference in determining the biomedical or behavioral model, except when comparing the workplaces of physical therapists in the behavioral model, pointing out that those from the public service had a higher score than those from the private service, but this was not statistically significant (p = 0.0622) (Table 4).

Table 3 - Correlation between age, time since graduation and PABS-PT scores

Variables	Biomedical score			Behvioral score		
	Mean	r[a]	p	Mean	r[a]	p
Age	33.2750	0.5208	0.0006	32.0588	0.4204	0.0928
Time since graduation[b]	120.0500	-0.1065	0.5132	68.1176	-0.1281	0.6242

Note: [a]Pearson r value. [b]Variable given in months. PABS-PT = Pain Attitudes and Beliefs Scale for Physiotherapists.

Table 4 - Comparison between the categorical variables and the PABS-PT scores

Variables	Biomedical score		Behavioral score	
	Mean	p[a]	Mean	p[a]
Sex				
Male	28.21	0.9264	28.25	0.2304
Female	28.36		24.87	
Postgraduation				
Yes	29.85	0.3019	24.50	0.3597
No	27.85		29.25	
Place of work				
Public service	28.60	0.2207	29.66	0.0622
Private service	30.80		21.00	

Note: [a]p-value for t-test. PABS-PT = Pain Attitudes and Beliefs Scale for Physiotherapists.

Discussion

Of the professionals who took part in the study, most were females (61.4%) and aged between 20 and 29 years (42.1%), which differed from Ostelo et al.,[15] who reported that the 421 physiotherapists interviewed were mostly males (63%) and aged over 42 years (50.3%). The workplace found by these authors reinforces what was seen in the present study, with a prevalence of care in private clinics (63.2%).

It was noted that most physiotherapists use specific methods alone or in combination for the treatment of CNLP (84.2%). Houben et al.[16] sought to determine whether the guidance of professionals in the management of low back pain influences the return to activities of daily living. As the main conservative methods for treatment, they found manual therapy, McKenzie method and chiropractic care, but conventional physical therapy was a recurrent finding (23.4%), differing from the present study, where only 15.8% did not use specific techniques.

In the results referring to the profile of beliefs and attitudes of physiotherapists, the biomedical profile showed higher recurrence (70.2%), which reinforces the findings of Desconsi et al.,[14] who also observed the prevalence of the biomedical score (85.7%) when describing the attitudes and beliefs of 49 physiotherapists. Currently, however, the biopsychosocial approach is recommended, to ensure a better prognosis.[17]

To adopt new care practices, it is necessary to recognize both the physiotherapist's profile of attitudes and beliefs and the therapist-patient factors.[18] In the correlations presented, age and biomedical profile were different from the study by Desconsi et al.,[14] in which the only relationship observed was between age and behavioral profile. Derghazarian and Simmonds[19] observed that physiotherapists in private practice have a more biomedical orientation than those who work in the public service, which differs from what was found in this study, where the closest relationship found was with the workplace and behavioral profile.

By identifying the sociodemographic characteristics that influence the attitudes and beliefs of Brazilian physiotherapists about chronic low back pain, Magalhães et al.[9] showed a significant association between biomedical score, sex and years of professional experience, with male and less experienced physical therapists more adept at a biomedical approach.

A factor that can be decisive for most physiotherapists to still fit into the biomedical model is the teaching structure of the curriculum guidelines of undergraduate courses. Note, however, that throughout the training process, students start to adopt a behavioral approach.[20]

Concluion

Regarding the management of CNLP, the wide dissemination of the importance of the behavioral approach for the patient's recovery process is well-known; however, the biomedical model is still predominantly used, which is related to the age of the professionals surveyed.

Acknowledgments

Authors' contributions

ITMS and LBBB were responsible for the structure the study, data collection and writing. FDRPS was involved with the methods, data collection and analysis, review of the manuscript and final draft. HBB, JSTM and RMS were responsible for the analysis and final review of the article.

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