Experiences of workers from a higher education institution with nonspecific low back pain: a qualitative study

Experiências de trabalhadores de uma instituição de ensino superior com dor lombar não específica: um estudo qualitativo

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ABSTRACT

The nonspecific low back pain is a condition has negative impacts in the economic and social spheres, since it directly relates to labor factors. The aim of this study was to analyze the experiences of workers of a higher educational institution with nonspecific low back pain. This was a research qualitative; in seven workers with nonspecific low back pain, of both sexes, aged over 18 years. For data collection, a semi-structured questionnaire was used. The interviews were recorded in audio and then transcribed and analyzed by the technique of content analysis. After analyzing the data, two categories of analysis were found: the first one was, discomfort in activities of daily living and in work is the second category was, relationship of low back pain with functional capacity and quality of life the work. The low back pain reflects in many contexts of the lives of employees, not only their functions at work, but also other situations of daily life.

Keywords: Pain assessment; Low back pain; Nonspecific low back pain; Qualitative study.

RESUMO

A dor lombar não específica é uma condição apresenta impactos negativos no âmbito econômica e social, pois está diretamente relacionada aos fatores laborais. O objetivo deste estudo foi analisar as experiências de trabalhadores de uma instituição de ensino superior com dor lombar inespecífica. Tratou-se de uma pesquisa qualitativa; com sete trabalhadores com dor lombar não específica, de ambos os sexos, com idade superior a 18 anos. Para coleta de dados, foi utilizado um questionário semiestruturado. As entrevistas foram gravadas em áudio e posteriormente transcritas e analisadas pela técnica de análise de conteúdo. Após a análise dos dados, foram encontradas duas categorias de análise: a primeira foi, desconforto nas atividades da vida diária é no trabalho e a segunda categoria foi, relação da dor lombar não específica com a capacidade funcional e qualidade de vida no trabalho. A dor lombar reflete em muitos contextos da vida dos funcionários, não apenas suas funções no trabalho, mas também outras situações da vida cotidiana.

Palavras-chave: Avaliação da dor; Dor lombar; Dor lombar não específica; Estudo qualitativo.

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INTRODUCTION

The nonspecific low back pain is a common condition in a large part of the population and is considered a public health problem, affecting up to 65% of people every year and up to 84% of adults at some time in their lives. This condition has negative impacts in the economic and social spheres, since it directly relates to labor factors[1].

The nonspecific low back pain has a multifactorial etiology, with interactions between mechanical, psychosocial and biological factors[2]; that labor activities that require strenuous physical effort and repetitive movements are among the causes of this affliction[3].

The diagnosis of nonspecific low back pain is not usually determined because its causal character involves a multifactorial dimension[4], as lumbar fascia may be involved in the onset of pain, and its implication is related to anatomopathological changes, as well as echogenic and mechanical changes in individuals affected by low back pain[5].

Nonspecific low back pain is a dysfunction that causes the worker to change his work hours, as well as his work duties to accommodate his pain; the which still affects quality of life outside work. Working while feeling sick is defined as "presenteeism" which may have affects work performance and productivity[6].

Often interrupting work activities leads employees to develop psychological problems due to inefficiency at work[7]. As a means of compensating for pain, workers adopt inappropriate postures to perform their activities; however, in the long run the pain symptoms worsen[8].

The worker supports the pain until the moment when the pain worsens, in some organizations the routine and the pace of the work leads the subject to ask to away the work. Therefore, strategies for mapping the pain episodes should be inserted in the organizations, analyzing the subjective, social, physical and emotional aspects of the employees[9]. The aim of this study was to analyze the experiences of workers of an higher educational institution with nonspecific low back pain.

METHODS

Study Design

This was a research qualitative, faithfully respected Resolution 466/2012 of the National Health Council, and was approved by the Ethics Committee on Human Research, of the University Center of Maranhão, with an approval number 2.226.161. Held at the Physical Therapy Laboratory, in April 2016.

Participants

The sample was composed of seven they employees of a higher education institution, allocated for convenience. The choice of these workers was because of the work activities performed by him, since they spend most of their time in the sitting position placing a great burden on the lower back.

We included patients from of both sexes and aged over 18 years of age, and who presented nonspecific low back pain, with a workload of at least 30 hours per week. And those who had neurological problems or unavailability to participate in the research were excluded.

Procedure

A verbal invitation was initially made to the employees of the institution in their workplace, when all the procedures and objectives of the research were explained; after acceptance, the researchers contacted them via telephone call to schedule a time for each employee.

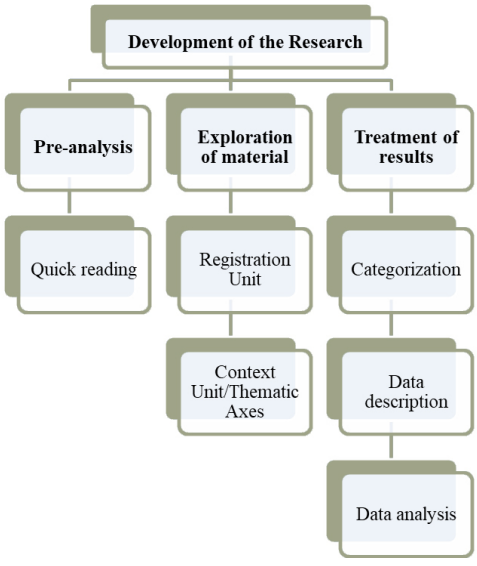
The employees were instructed to sign the Informed Consent Form (ICF) and only after this act the interview was conducted. The interview was conducted with an initial warming, a more informal moment for the researcher to approach the interviewee when the researcher established a dialogue with the employees. Real names were replaced by P and a corresponding numbering (e.g.: P1, P2…P7). Interviews were audio recorded, and afterwards heard several times in order to know the material and soon after they were transcribed. The interview had the aim to know the impacts of nonspecific low back pain in the lives of the employees. The face-to-face interview is based on a situation of human interaction, in which the perceptions of the other and of oneself, the expectations, feelings, prejudices and interpretations for the protagonists - interviewer and interviewee - are at stake. The interviewer has information and looks for further knowledge, whereas the interviewee also processes a set of knowledge and preconceptions about the interviewer[10].

Data Analysis

Data were analyzed through the technique of content analysis; is a set of communication analysis techniques supported on systematic and objective procedures for description of the content of messages in order to obtain indicators (quantitative or otherwise) that allow the inference of knowledge regarding the production/reception conditions (inferred variables) of these messages[11].

The first stage of the content analysis process was the pre-analysis of the data, where quick readings were performed. After this step, data were organized into a registration unit, a usually broader unit of research. The objective of this step is to set contextual limits. Context units stemmed from the registration unit, which are identified from homogeneous terms in the text. The organization of these units gave origin to the categorization of the analyses [11]. (Flowchart 1).

Flowchart 1. Description of the content analysis process.



Source: survey data.

The technique of content analysis is chronologically fragmented and systematized[11,12]:

Pre-analysis: it is considered the phase where data

is organized in order to create the corpus of the research. "The corpus is the set of documents taken into account to be submitted to analytical procedures"[11]. In this phase, we performed the quick reading of the interviews already transcribed looking for a first perception of the messages contained in the text, leaving us "to be invaded by impressions, representations, emotions, knowledge and expectations"[12]. **Exploration of material:** in this step, the registration and context units were defined; "Gross results are treated in a way to give meaning (speaking) and validate them. This stage is basically the systematic organization of the decisions taken"[11], and then the registration unit is created. "The registration unit is the smallest part of the content whose occurrence is recorded according to the categories raised". The records can be of different types: word, theme, character or item. In the present research, we chose the theme[12]. (Table 1).

Table 1. Registration units according to the repetition of the theme.

Themes
Description of pain.
Intensity of pain.
Stress.
Interference of low back pain in the sleep.
Coping with pain.
Abrupt movement.
Work performance.

Source: survey data.

After completing this step, context units were established. Out these units as the background that generates meaning to the categories[12]. The color boxes describes the pertinence, originating the context units, the white boxes describes the inexistence of data's. The pertinence of the themes was used here, which were stratified according to their recurrence in the interviews[11]. With the help of the registration units, we returned to the data to search for the recurrences and the singularities of the themes, looking for what each interviewee had said in order to quantify the pertinence of the themes (Table 2).

Table 2. Description the process of arise of context units and frequency in the speech of the patients.

		Patients						
Registration Units	**Context units**	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**	**P7**
-Description of pain. -Intensity of pain.	-Discomfort in activities of daily living.	■	■	■	■		■	
-Stress. -Interference of low back pain in the sleep. -Coping with pain. -Abrupt movement. -Work performance.	-Resistance to the discomfort of pain at work. -Emotional changes due to pain. -Postural changes.	■ ■ ■	■	■	■ ■	■	 ■	■ ■

Source: survey data.

Treatment of results: at this stage, data were organized based on context units/thematic axes. "classification of constitutive elements of a set by differentiation and consequent grouping according to genera (analogy), with the previously defined criteria". The analytical categories of are described in the box below. These categories originated from the registration units/thematic axes [11]. (Table 3).

Table 3. Description the process of arise of analytical categories.

Context units	Analytical categories
Discomfort in activities of daily living Resistance to the discomfort of pain at work.	Discomfort in activities of daily living and in work
Emotional changes due to pain Postural changes	Relationship of low back pain with functional capacity and quality of life the work.

Source: survey data.

RESULTS AND DISCUSSION

The final sample consisted of seven employees; six participants were female, and one was male, and ages ranged from 20 to 65 years; with working hours of 40 weekly hours is with regard to the working time of the participants was from two to five years. The information obtained interview allowed us to observe the main characteristics of the symptomatology caused by low back pain, as well as its effects on the quality of life in work and functionality of the participants with respect to labor activities, generating the following analytical categories:

The lumbar region plays an important role in sustaining the body weight through muscular strength and resists biomechanical factors. However, performing intense or long lasting task triggers morphofunctional instability in the lumbar spine that may result in pain[13]. In the present study, all workers were doing 40 hours a week, with eight hours a day, with interval for an hour lunch; however, during the journey pauses were not performed, which may justify the overload in the lumbar region and consequently the low back pain.

Discomfort in activities of daily living is discomfort in work

> *The pain is strong. I feel it more intensely when I walk on uneven ground, if I get up at once I feel something like an electric shock, you know? There is this pain here (lumbar region) (P6).*

> *I feel pain, especially when at six or seven o'clock at night, because it accumulates (P1).*

> *Well, let's say it gets worst at times, it hurts more in the afternoon and evening (P4).*

Nonspecific low back pain reflects in the work, and in still in the execution of the personal activities, it is at the end of the period in which the episodes of pain increase[6], as well as reported by P1 and P4 in the present study in the pain is more frequent at the end of the late and late at night.

The reports found made it possible to identify the particularities and factors that triggered pain in the lumbar region of the employees and, based on their routines, to identify the main causes of that discomfort."*It hurts when I spend a lot of time standing or when I go downstairs to get something, then I feel it in my legs*", said P5.

It was common among participants the type of occupation in which it is necessary to spend long periods of time standing or sitting, resulting in severe pain in the lumbar region, causing the patients to have to interrupt their activities:

> *When it (the spine) gets "dismantled" I can't stand upright, I lose balance all the time (P6).*

> *[...] I try to relieve ... sometimes I need to stop, I sit down a bit to relax (P2).*

Although pain is a factor that directly influences social participation, it often does not let up and employees have to endure it in order to conclude their activities; so, they learn to live with the pain.

The low back pain is the main cause of limitation of work activities and absenteeism all around the world[14], is can be caused by the adoption of the repetitive postures for a long period of time, either sitting, lying or standing[15]. It was common among participants the type of occupation in which it is necessary to spend long periods of time standing or sitting, resulting in severe pain in the lumbar region, causing the participants to have to interrupt their activities in hours other than break time, preventing them to develop their activities.

Relationship of low back pain with functional capacity and quality of life the work

The pain felt by the employees causes changes that lead to emotional, psychic and physical disorder; such as stress and embarrassment due to physical limitations. The main changes were related to labor activities, when the pain was more frequently present, generating limitations and consequent lower performance in the exercise of their functions.Therefore, pain reflects in the social and economic context.

> *It is not a strong pain, it comes and goes, when I spend too much time sitting or standing, I feel pain in the lower back and down to the legs.When I spend a lot of time sitting or standing I feel the pain radiate to the heel (P3).*

> *I feel more pain when I carry heavy things or when I have to bend down (P2).*

The limitations imposed by low back pain caused the patient P6 to experience unwanted situations that affected his social and emotional context; the patient's speech reveals the major limitations that low back pain caused him:

> *This pain affects very negatively my work. Inf act, when I have crises, for real, I fall down and I'm feel ashamed of anyone seeing me like this. In that case, in this condition when I fall, you can leave me there, because if someone touches me, it's worse (P6).*

Pain causes limitations that go beyond the physical aspect, affecting psychological and social aspects[16]. As a result, daily activities are compromised, generating personal dissatisfaction and situations of exhaustion[17]. Lumbar pain is associated with significant emotional distress or significant functional deficit that interferes with daily life activities and social participation[18]. This was evident in the analysis of the speech of the patient P6 who experienced situations of embarrassment for the pain, refusing help, and even getting stressed out when someone tried to help.

He also reported the need to endure and having to live with the pain:

> *There is no way I for me to quit work because at home I'm the only one who works, and I have a very big family, I even have a young boy and it's just me who works [...] So, that it has to be me really (P6).*

The pain in the lower back was not the only thing to cause discomfort; the interviewees also stated that they had suffered from changes in sleep patterns and stress caused by the pain.

> *Also, the times I sleep with my daughters I wake up destroyed (P1).*

Nonspecific low back pain is a manifestation that directly affects the psychological state of the workers, which generates insecurity in the accomplishment of the activities and fear of being avoided, factors that can interfere in the execution of the work[19]. In some cases the employee continues his activity even with pain, afraid of losing his job[20].

The results obtained in the two categories show that low back pain is a discomfort that affects employees in their whole biopsychosocial state. Without any intervention to reduce pain, the individuals will be gradually more impelled to live in a painful state. Since the lumbar spine is the base that supports body weight, the excessive movements, incorrect postures, and repetitive movements incur a destabilization of the region that may affect daily life and work activities, generating functional disabilities and changes in the individual's quality of life.

CONCLUSION

The results of this research led us to conclude that low back pain reflects in many contexts of the lives of employees, not only their functions at work, but also other situations of daily life, causing discomfort, functional limitations, stress and psychic changes.

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