Prevalence of Low Back Pain and Quality of Life in Healthcare Students

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ABSTRACT	ARTICLE DETAILS
Low back pain is a health problem that can harm several factors related to daily life and work for the entire population. The objective was to evaluate the prevalence of low back pain and quality of life in health students. Descriptive study with a cross-sectional method composed of 74 students enrolled in nine courses related to the health area at a private higher education institution. They were assessed using the participants' general characteristics questionnaire, the Oswestry 2.0 questionnaire and the SF-36 Quality of Life Questionnaire. The majority of participants were female, aged between 20 and 30 years old, single, full-time and evening students and studying Physiotherapy and Medicine. 68.9% reported remaining in a sitting position throughout the day, 81.1% had already had attacks of low back pain during the graduation period and 10.8% were already using analgesic medication due to the presence of low back pain. The SF-36 questionnaire presented domain values between 45 and 63 points. 87.8% of students were classified by the Oswestry 2.0 index as having minimal lumbar disability, 10.9% with moderate disability and 1.3% with severe disability. Most health students have a history of low back pain, but with limitations considered low. **KEYWORDS:** Low back pain. Quality of life. Academic. Health.	

INTRODUCTION

Lumbar pain or low back pain is defined as pain between the lower border of the 12th rib and the lower line of the hip, causing pain, discomfort, fatigue or muscle stiffness in the lower third of the spine, with variable duration and intensity (CARGNIN et al., 2019).

The emergence of the development of low back pain is still unclear due to the numerous factors that can lead to its appearance, some of which may be related to repetitive work such as pulling and pushing, falls, poor posture, squatting, lifting weights, muscle imbalance, compressive syndromes, among others (RAMOS et al., 2020).

An important factor that may be related to the development of low back pain is lifestyle. According to the definition of the World Health Organization (WHO, 2004), lifestyle is a series of habits and customs that are affected, modified, stimulated or inhibited by the long-term socialization process. These habits and customs include the use of substances such as alcohol and tobacco, as well as eating habits and physical activity levels (WHO, 2023).

Important sociodemographic, lifestyle and reproductive factors are related to the occurrence of persistent low back pain. Individuals with advanced age and socioeconomic disadvantage are more likely to develop low

back pain. Additionally, low levels of physical activity, smoking, and multiple births are also associated with a greater likelihood of low back pain (SANT´ANNA et al., 2020).

Low back pain has three levels of classification according to its intensity and duration, being acute, subacute and chronic when the duration of the episode, respectively, is less than 06 weeks, lasts 06 to 12 weeks and is more than 03 months and can also , be classified into specific and non-specific pain (ANTONELLI et al., 2021; SOUTO, 2021).

In addition to restricting work and leisure activities and reducing functional capacity, chronic pain can also lead to a decrease in quality of life through pain, treatment failure, drug dependence, social isolation, difficulties at work and emotional changes. Furthermore, it can also cause irritation, disturb sleep, reduce appetite and cause serious physical, psychological and social consequences (DE OLIVEIRA PIRES et al., 2022).

According to Ribeiro et al. (2018), low back pain is associated with poor posture and physical inactivity, causing pain that affects the individual's quality of life.

Cargnin et al. (2019), state that, in some cases, low back pain leads to disability and persistence of pain aggravated by factors such as high pain intensity and psychological impairment. The associated costs, use of health services and disability due to low back pain vary across countries, influenced by local culture, social systems and health beliefs. The incidence of low back pain is expected to increase, mainly in low- and middle-income countries with fragile health systems that cannot support this circumstance.

In order to deepen knowledge about low back pain and quantify its prevalence within a population group, this study addresses the following research problem: what is the prevalence of low back pain and quality of life in academics in the health field?

The general objective of this study was to evaluate the prevalence of low back pain and quality of life in academics in the health field, while the specific objectives were to identify the risk of low back pain in academics and evaluate their quality of life.

METHODS

The study was defined as descriptive and with a quantitative approach. For technical procedures, the study was characterized as cross-sectional research. Finally, a quantitative approach was used.

The population of the present research was composed of academics from courses related to the health

area. The sample was made up of 74 individuals, of both sexes, aged between 20 and 50 years old from a University in the city of Caçador - SC.

The inclusion criteria were academics in the health area who were duly enrolled at the University, over 18 years of age and who were available to answer the online questionnaire and agreed to sign the Free and Informed Consent Form and those excluded were academics who answered the questionnaires incorrectly.

The project was approved through Opinion No. 4.612.492 of the Ethics Committee of the Central Education Unit Faem Faculdade – UCEFF, according to recommendations in resolution 466/12 of the National Health Council for scientific research with human beings. After approval by the Ethics Committee, the research was published on the researcher's social networks and participants had access to the Free and Informed Consent Form (ICF), thus authorizing their participation in the research.

To respond to the objectives proposed in this study, data collection was carried out through a mixed online questionnaire developed on the Google Forms® platform and made available through the link https://forms.gle/mZNLYbv2fMPkaAKRA.

Participants were recruited by publishing the questionnaire link on the academic and supervisor's social networks Facebook®, Instagram® and Whatsapp®. The collection period took place between June and September 2021.

The assessment consisted of questions relating to the general characteristics of the participants, the application of the Oswestry 2.0 low back pain questionnaire and another questionnaire that assessed quality of life (SF-36). These were answered by academics who were in agreement with its application.

The data were tabulated and analyzed using the Microsoft Excel® 365 program. The results were demonstrated through descriptive analysis of the data.

RESULTS AND DISCUSSION

74 health academics were evaluated and data regarding the sample characteristics are described in Table 1.

Observing the results, there is a predominance of female responses (90.5%), aged between 20 and 30 years old (96%), single (85.1%), full-time students (50%) and night students (46%) in various courses in the health area, but with emphasis on the Physiotherapy course (43%) followed by the Medicine course (12.1%).

Table 1 -Profile of the sample of academics graduating in the health field

	(n=74)	%
Sex		
Feminine	67	90.5
Masculine	07	9.5
Age		

between 20 and 30 years old	71	96
between 31 and 40 years old	02	2.7
between 41 and 50 years old	01	1.3
Marital status		
Single	63	85.1
Married/consensual union	11	14.8
Time of day during graduation		
Morning	02	2.7
Evening	01	1.3
Nocturnal	34	46
Full	37	50
Undergraduate courses		
Physiotherapy	43	58.1
Nursing	04	5.5
Nutrition	05	6.7
Medicine	09	12.1
Psychology	03	4.0
Dentistry	01	1.4
biomedicine	01	1.4
Physical education	07	9.4
Pharmacy	01	1.4

Source: The Authors (2023)

Table 2 represents the results of possible variables causing the onset of low back pain and the use of medications to control pain. It can be observed that the sitting position was predominant, representing 68.9% of the sample, of which 81.1% had already had attacks of low back pain during the undergraduate period and 10.8% were already using analgesic medication or muscle relaxants. due to the presence of low back pain.

Table 2- Predominant position, presence of lumbar crises and use of medication in undergraduate health students

	(n=74)	%
Predominant position during class time		
Seated	51	68.9
Standing	16	21.6
Don't know how to quantify	07	9.5
Lumbar spine pain crisis during graduation period		
Yes	60	81.1
No	14	18.9
Continuous use of analgesic or muscle relaxant medication		
Yes	08	10.8
No	66	89.2

Source: The Authors (2023)

Corroborating the results found in Table 2, Gomes-Neto; Sampaio; Santos (2016), found that 45% of students do not have a fixed position during classes, 29.5% stated that they remained seated and 25.5% in a standing position.

In another study, when evaluating 53 dentistry students, John; Brito; Armondes (2018), found that 90.5% of those assessed consider spending most of their time in a sitting position.

Regarding pain crises in the lumbar spine Rodrigues (2019), evaluated the presence of low back pain in 56 students from the Physiotherapy course at a university in Paraíba and found that 62.5% identified having low back pain, in some cases for more than five years.

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Sousa; Loyal; De Carvalho (2017), evaluated the presence of low back pain in the last 3 months in a group of 171 students from Physiotherapy and Psychology courses, similar to the findings in this study which identified that 80.7% confirmed having symptoms of pain in this region.

When evaluating musculoskeletal symptoms of university students in the health field,Gomes-Neto; Sampaio; Santos (2016), identified a prevalence of 62.5% of low back pain reported in the last 12 months. Likewise, Morais; Silva; Silva (2018), evaluated the presence of low back pain in Physiotherapy students at a University of Maranhão and found a prevalence of 56.3%.

Regarding the use of medicines, Baptist; Soares (2016), evaluated 518 students from different courses at a University in the state of Sergipe and identified that 11.7% use painkillers and 5.3% use medication for muscle pain, which is similar to the results found in this research.

Table 3 represents the results of the quality of life assessment carried out using the SF-36 questionnaire. This questionnaire is divided into domains where values close to 0 classify students with a worse quality of life, while values closer to 100 classify them as having a better quality of life.

Observing the results, the domains functional capacity, limitation due to physical aspects, pain, general health and mental health presented values slightly above 50%, while the domains vitality, social aspects and limitation due to emotional aspects presented values slightly below 50%. %, therefore, no domain was classified as worse quality of life.

Table 3 -Result of the quality of life assessment (SF-36) of undergraduate health students

	Punctuation(n=74)
Functional capacity	63
Limitation due to physical aspects	62.5
Pain	63
General health status	53.5
Vitality	45
Social aspects	48.7
Limitation due to emotional aspects	46.7
Mmental Health	51.6

Source: The Authors (2023)

When comparing the results in Table 3 with other studies, it is observed that Alfredo; Biondi; Manna (2016), evaluated the quality of life in 363 Physiotherapy students from a University in the state of São Paulo and identified results similar to this study. Functional capacity had the highest score with 85.6% and vitality presented the lowest result with 45.9%, with the exception of functional capacity, other quality of life capacities presenting results between 45 and 66%.

Costa; Da Silva; Machado (2018), evaluated the quality of life of 132 Physiotherapy students from a University of Minas Gerais and identified that functional capacity was the quality of life variable with the highest results, having an average of 89.1%, meanwhile, the lowest values were the general state of health and vitality with 63.8% and 58.0%, respectively.

When evaluating the quality of life of 630 students from four health courses, Paro; Bittencourt (2013), found, in the same way as in this study, that functional capacity was the variable related to quality of life with the best score, ranging between 84 and 95% depending on the year and course of the academics. The worst results were presented in vitality where, in all courses and years, they presented lower results, ranging from 33 to 66%.

In a study carried out with 110 students from the Physical Education course, Artigas; Moreira; Campos (2017), identified that the highest quality of life indices were in functional capacity with an average of 94.7%, with the other aspects evaluated presenting average values of 58 to 78% with vitality being the worst evaluated with an average result of 58.8 %.

Viana; Sampaio (2019), when evaluating 100 academics from different courses, also identified that functional capacity was the quality of life assessment with the best score, totaling 79.3%, meanwhile, the other results varied between 38 and 67%, with pain having the worst score , rated at 38.4%.

Observing the results found by evaluating the Oswestry Index 2.0 (Tables 4 and 5), the results presented an average of 10.6% (±8.5) with the minimum being zero (0%) and the maximum being (44%) . Regarding the type of disability, it can be seen that 87.8% of students were classified by the index as having minimal disability, 10.9% with moderate disability and 1.3% with intense disability in relation to lumbar discomfort.

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Table 4 -Oswestry Disability Index 2.0

	Average (n=74)	Minimum(n=74)	Maximum(n=74)
Index (%)	10.6(±8.5)	0	44

Source: The Authors (2023)

Table 5 -Type of Disability

	(N=74)	%
Minimum disability	65	87.8
Moderate disability	08	10.9
Intense disability	01	1.3

Source: The Authors (2023)

When comparing the results in Tables 4 and 5 with other studies Rodrigues (2019), found very similar results to this study when evaluating the type of disability related to low back pain in 56 Physiotherapy students, where the results showed that 87.5% had minimal disability and 12.5% moderate disability.

Sousa; Loyal; De Carvalho (2017), identified results similar to this study when evaluating a group of 171 Physiotherapy and Psychology students, where the majority of those evaluated had minimal disability, totaling 98.6% of the sample, while the remaining 1.4% had moderate disability.

In the study of Gomes-Neto; Sampaio; Santos (2016), with 200 students from different courses at a University in the state of Sergipe, it was found that 86.4% had minimal disability, 11.4% moderate disability and 2.2% intense disability, these results being very similar to those present in this study.

FINAL CONSIDERATIONS

Low back pain is a disease that affects a large number of people, causing discomfort and pain, as well as making it difficult to carry out daily activities, leisure and work.

With this study it was possible to verify that a large number of academics in the health area suffer from low back pain problems and that, associated with this fact, may be the issue of remaining in a sitting position for a long time, which generates slight limitations. Even so, it is important to highlight that a considerable portion suffers from moderate and high limitations.

The assessment of the presence of pain and quality of life is important as an identifier of factors related to health, however, in addition to the information obtained through this study, further studies should be carried out together with practical actions that can act to reduce the prevalence of this disease. , and it is suggested that this type of study be applied to other types of populations to identify whether this cause is unique to a population group or whether it affects more groups.

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