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PROFILE OF NURSING PROFESSIONALS AND THEIR CHARACTERISTICS AS TO THE INTENSITY OF LOW BACK PAIN IN A HOSPITAL OF BRAZIL

Polliana Radtke dos Santos*, Patrik Nepomuceno, Maiara Helena Rusch, Valeriano Antonio Corbellini and Hildegard Hedwig Pohl

University of Santa Cruz do Sul, Santa Cruz do Sul, Rio Grande do Sul, Brazil.

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***Corresponding author:**
Polliana Radtke dos Santos

ABSTRACT

Objective: To describe the profile of nursing workers in a hospital in Brazil and to compare sociodemographic, lifestyle, labor, anthropometric and bio-psychosocial variables regarding pain intensity. **Methods:** This is a cross-sectional study. After applying an initial questionnaire to select participants, was applied a lifestyle questionnaire, and the Back Screening Tool questionnaire (SBST-Brazil). It was also collected the pain level by Visual Analog Scale (VAS), and the body weight and height, to calculate the Body Mass Index. The professionals were divided according to the intensity of pain: VAS <5 (mild/moderate) and VAS ≥5 (moderate/severe). **Results:** The sample (n= 53) was composed of females, with an average age of 32.2 years (SD 8.5), single, without children, with a predominance of nursing technicians (81.1%), and an average of 80.7 months of work. The presence of 54.7% overweight was observed. As for SBST-Brazil, there was a low risk of poor low back pain prognosis and workers with medium/high risk had a higher level of pain, in addition to an increase in the chances of 7.5 (95% CI 2.08-27.01) greater pain in professionals with medium/high risk**. Conclusion:** There was a predominance of mild/moderate low back pain and an association of bio-psychosocial assessment variables with pain intensity.

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INTRODUCTION

The worker's health scenario becomes increasingly attractive to the scientific world, since workers represent the economically active range and their illness can interfere in the population as a whole (Vazquez *et al*., 2018). Therefore, it is emphasized that low back pain has been the main cause of occupational disability since 1970, remaining superior to headaches, depression, diabetes, among others (IHME, 2018), being one of the most common musculoskeletal disorders worldwide (Yokota *et al*., 2019; Yoshimoto *et al*., 2019a). It is important to highlight that this should not be considered a disease, but rather a symptom of acute and/or chronic pain, not being restricted to the anatomical region of the spine, as it is a condition that permeates the physical and, often, is related to the bio-psychosocial (Di Donato *et al*., 2019; Hartvigsen *et al*., 2018), being characterized as a multi-factorial etiology (Almeida e Kraychete, 2017; Batista *et al*., 2017; Golob e Wipf, 2014).

Among its prevalence in occupational groups, nursing stands out, which is immersed in the hospital environment and predisposed to the presence of low back pain (Medeiros *et al*., 2018; Samaei *et al*., 2017; Silva *et al*., 2017; Suliman, 2018). These professionals are exposed to several factors that can lead to illness such as, for example, physical problems, stress, manual activity, work shifts (night and/or rotating), work overload, biomechanical loads, inappropriate postures, repetitive movements, failure in the organization of work, collection and productivity (Cargnin *et al*., 2019; Maciel Júnior *et al*., 2019; Yoshimoto, Oka, Fujii, *et al*., 2019). Considering this scenario, it is emphasized that, in addition to ergonomic factors, psycho-socials are extremely important in the context of low back pain, especially regarding their chronicity (Alperovitch-Najenson *et al*., 2015; Hartvigsen *et al*., 2018; Yoshimoto *et al*., 2019b). Therefore, the investigation of the cause of low back pain goes beyond physical and/or physiological changes, covering lifestyle and bio-psychosocial issues (Almeida e Kraychete, 2017; Silva *et al*., 2017). There are several methods used to evaluate such variables, among them is the Back Screening Tool questionnaire (SBST-Brazil) (Pilz *et al*., 2014),

which is being used globally and from its score and subsequent classification it is possible predict the prognosis of low back pain in 6 months (Pilz *et al*., 2014; Yoshimoto *et al*. 2019a). From the above, it is clear that low back pain can be related to numerous factors, often complex (Cargnin *et al*., 2019), which demonstrates the need for a multidimensional perspective in assessing this condition (Yoshimoto et al., 2019b). It is extremely important to diagnose and categorize low back pain and its possible causes, for better planning and adequate treatment (Yokota *et al*., 2019), since it can generate costs not only for the employee, but also for institutions/companies and coffers public, since there is a reduction in the quality of life and well-being, absenteeism or even absence from work/profession (di Donato *et al*., 2019; Samaei *et al*., 2017; Suliman, 2018; Vitta *et al*., 2012; Zapata, 2015). Thus, the present study sought to describe the profile of nursing workers in a hospital in of Brazil and to analyze the social-demographic, lifestyle, labor, anthropometric and bio psycho-social variables involved in the intensity of low back pain.

METHODS

Design and ethical aspects: This is a cross-sectional, observational, descriptive and analytical study, of a quantitative character, carried out with nursing workers in a hospital of Brazil, approved by the Research Ethics Committee of the University of Santa Cruz do Sul (CAAE No. 99490918.4.0000.5343), which is part of a major research project entitled "Screening of risk factors related to obesity, lifestyle, cardiometabolic health and chronic non-communicable diseases: impact of health promotion and education on rural and urban workers – Phase IV". The sample size calculation was performed using an online calculator considering 295 nursing professionals working in the day shift, with a sample error of 10% and a confidence level of 95%, with 52 respondents being required.

Sample and selection criteria: Participants were selected by applying a questionnaire, with questions regarding the inclusion and exclusion criteria of the research. We selected: nurses and nursing technicians who manifested the presence of low back pain in the initial questionnaire; who worked in open units (adult and pediatric, maternity and outpatient wards) and closed units (neo-pediatric and adult intensive care units, surgical and obstetric centers) during the day (morning and afternoon); of both sexes, aged between 18 and 50 years; those who agreed to participate in the study by signing the Free and Informed Consent Term (ICF). The exclusion criteria were: nursing worker who has undergone previous surgical interventions on the spine; pregnant women; diagnosed with fibromyalgia; who presented with any clinical dysfunction that made it impossible for him to participate in the study or who suffered an amputation of any member of the body; Body Mass Index (BMI) ≥ 30 kg/m2, that is, with obesity. 143 professionals participated in the initial selection, of which 68 met the necessary criteria for the evaluations, remaining a total of 53 questionnaires answered.

Data collected: According to previous scheduling and release of workers in the work shift, an adapted questionnaire was applied (Pohl *et al*., 2010), which consists of information regarding identification data, economic indicators, daily organization, physical activities and sports and health indicators. It is worth remembering that the last item consisted of checking the weight (kilograms) and height (centimeters, later converted into meters), to then perform the BMI calculation, by dividing the weight by the square height, and categorizing this variable (Low weight: <18.5; Recommended range: 18.5-24.9 kg/m2; Overweight: 25-29.9 kg/m2; Obesity: ≥30 kg/m2) (WHO, 2004). The SBST - Brazil questionnaire (Pilz *et al*., 2014) was also applied, which is completed by the individual and refers to the risk of poor prognosis in the primary treatment of low back pain in these workers. After the sum of the points, values between zero and three were classified as low risk. For a total score above three, the classification was performed from the psychosocial subscale (corresponding to item 5 to 9), if the score in this subscale was below three points, the patient had a medium risk and if it was greater than three the risk was high(Pilz *et al*., 2014).

For the assessment of pain, the Visual Analog Pain Scale (VAS) was used (Torres, 2006), which consists of levels from zero to ten, in which the individual should self-refer to the intensity of pain at the time of applying the questionnaires, being zero absence of pain and ten the maximum pain perception experienced by the individual.

Statistical methods: The data were analyzed using the Statistical Package for Social Sciences for Windows (SPSS Inc., Chicago, IL, USA), statistical software package (version 23.0). Categorical variables were presented as frequencies and percentages and continuous variables as means and standard deviations. The sample was divided according to the intensity of pain from VAS: <5 (mild/moderate) and ≥5 (moderate/severe).To check the difference between the groups, Pearson's chi-square test or Fischer's Exact test was performed for categorical variables, and Shapiro Wilk test, followed by Mann-Whitney U test or t test of independent samples, for numeric variables. In addition, Spearman's and Pearson Correlation test, relative risk estimation (Odds ratio- univariate analysis) and the calculation of the effect size were performed using an online calculator using the Cohen's d test being considered effect sizes small (d<0,2), moderate (d=0,2-0,7) and large (d≥0,8)(Lenhard e Lenhard, 2016).For all statistical tests, significance was set at $\alpha < 0.05$.

RESULTS

From the initial questionnaire, carried out to select the sample, there was a prevalence of low back pain of 69.2% of hospital workers. However, based on the eligibility and participation criteria of the evaluations, a total of 53 workers answered the survey questionnaire. The sample consisted of females, with a mean age of 32.2 years (SD 8.5), predominance of single marital status and white skin color. There was a statistical difference between the groups regarding mean age ($p = 0.027$) and marital status ($p = 0.041$), with a moderate effect magnitude ($d = 0.598$, $d = 0.584$, respectively). it is believed that the pain tends to be more intense with increasing age, increasing the chances by 5.4 (95% CI 1.57-18.44), as well as in married workers in which there was an increase in the chances of 3.5 (95% CI 1.02-11.80). No difference was observed for the othersvariables;however, the presence of children predisposes to the appearance of greater low back pain (Table 1). As for lifestyle, there was no significant difference between groups. However, there are important points to be highlighted, such as the high percentage of non-practitioners of physical activity (71.7%) and without the presence of sleep disorders (81.1%), low consumption of tobacco and alcohol, as well as high use of medications, however it is worth mentioning that the use of contraceptives was the most mentioned in the sample (54.7%) and in many cases the only one mentioned (41.5%) (Table 2). In addition, it is noticed that nurses have more mild/moderate low back pain, and nursing technicians are distributed in different intensities, although the difference was not significant. It was also found that the shift, unit and posture at work did not influence the level of pain. However, workers with less pain tend to feel better after a day at work and tiredness and exhaustion are more reported by those with moderate/severe pain ($p = 0.005$ and $d = 1,000$), increasing the chances by 7.5 (95% CI 2.09-27.01) for moderate/severe low back pain. Although there was no a statistical difference and the effect size was small, a higher average working time in the nursing area is observed in the group with moderate/severe pain. It is also emphasized that there was a predominance of nursing technicians (81.1%), the average working time was 80.7 months (SD 74.5), most reported working most of the time standing (56, 6%) and 21.1% perform another paid activity (Table 3). The highest average score in the SBST - Brazil questionnaire occurred in the group with moderate / severe pain ($p = 0.002$), and it was also observed that workers with medium / high risk had a higher level of pain than those with low risk ($p = 0.005$) (Table 4). In addition, professionals with medium / high risk had an increased chance of 7.5 (95% CI 2.09-27.01) of manifesting a higher level of pain.Although the BMI does not present a statistical difference between groups with different levels of pain (Table 4), there is a higher prevalence of overweight among

Table 1. Sociodemographic characterization of workers based on pain intensity

Variables	VAS		p	d
	Mild / Moderate n (%)	Moderate / Intense n (%)		
Sex				
Female	31 (58,5)	22 (41,5)	-	-
Age†	30,2 (8,7)	35,1 (7,4)	0,027[b]	0,598
Socioeconomic Class				
A and B	14 (53,8)	12 (46,2)	0,501[a]	0,186
C and D	17 (63,0)	10 (37,0)		
Marital status				
Single	25 (67,6)	12 (32,4)	0,041[a]	0,584
Married	6 (37,5)	10 (62,5)		
Skin color				
White	22 (56,4)	17 (43,6)	0,608[a]	0,141
Black/Brown/Mulatto	9 (64,3)	5 (35,7)		
Children				
Yes	11 (45,8)	13 (54,2)	0,089[a]	0,481
No	20 (69,0)	9 (31,0)		

n: absolute frequency; %: relative frequency; †Mean and standard deviation; [a]: Pearson's chi-square test; [b]: Mann-Whitney U test; Statistical difference: p <0.05; d: effect size. Source: Research data, 2019.

Table 2. Characterization of lifestyle based on pain intensity

Variables	VAS		p	d
	Mild / Moderate n (%)	Moderate / Intense n (%)		
Physical activity				
Yes	7 (46,7)	8 (53,3)	0,272[a]	0,305
No	24 (63,2)	14 (36,8)		
Hours of sleep				
<7 hours	17 (63,0)	10 (37,0)	0,501[a]	0,186
≥7 hours	14 (53,8)	12 (46,2)		
Sleep Disorder				
Yes	5 (50,0)	5 (50,0)	0,545[a]	0,167
No	26 (60,5)	17 (39,5)		
Domestic workday				
<2 hours	16 (61,5)	10 (38,5)	0,659[a]	0,121
≥2 hours	15 (55,6)	12 (44,4)		
Smoking				
Yes	1 (25,0)	3 (75,0)	0,295[b]	0,396
No	30 (61,2)	19 (38,8)		
Alcohol consumption				
Often	8 (61,5)	5 (38,5)	0,710[a]	0,229
Rarely	15 (62,5)	9 (37,5)		
None	8 (50,0)	8 (50,0)		
Medicaments				
Yes	22 (57,9)	16 (42,1)	0,889[a]	0,039
No	9 (60,0)	6 (40,0)		

n: absolute frequency; %: relative frequency; [a]: Pearson's chi-square test; [b]: Fisher's exact test; Statistical difference: p <0.05; d: effect size. Source: Research data, 2019.

Table 3. Characterization of work based on pain intensity

Variables	VAS		p	d
	Mild / Moderate n (%)	Moderate / Intense n (%)		
Professional category				
Nursing	7 (70,0)	3 (30,0)	0,494[b]	0,227
Nursin technician	24 (55,8)	19 (44,2)		
Work shift				
Morning	14 (60,9)	9 (39,1)	0,487[a]	0,334
Afternoon	13 (52,0)	12 (48,0)		
Morning and Afternoon	4 (80,0)	1 (20,0)		
Unit of work				
Open	18 (58,1)	13 (41,9)	1,000[a]	0,021
Closed	13 (59,1)	9 (40,9)		
Activity time (months) †	76,9 (80,8)	86,1 (66,1)	0,278[b]	0,123
Other remunerated activity‡				
Yes	5 (45,5)	6 (54,5)	0,281[a]	0,299
No	26 (63,4)	15 (36,6)		
Predominant posture at work				
Draw	16 (53,3)	14 (46,7)	0,384[a]	0,302
Seated and alternated	15 (65,2)	8 (34,8)		
How do you feel after a day at work				
Very well/Weel	8 (72,7)	3 (27,3)	0,005[a]	1,000
A little tired	1 (75,0)	6 (25,0)		
Very tired/exhausted	5 (27,8)	13 (72,2)		

n: absolute frequency; %: relative frequency; †Mean and standard deviation; [a]: Pearson's chi-square test; [b]: Fischer test; ‡ 1missing; Statistical difference: p <0.05; d: effect size. Source: Research data, 2019.

Table 4. Difference between groups regarding SBST-Brazil and BMI

Variables	VAS		p	d
	Mild / Moderate n (%)	Moderate / Intense n (%)		
SBST score†	1,9 (1,5)	3,4 (1,7)	0,002[b]	0,946
SBST classification				
Risk Low	26 (74,3)	9 (25,7)	0,005[a]	0,986
Risk Average	4 (26,7)	11 (73,3)		
High Risk	1 (33,3)	2 (66,7)		
BMI in kg/m^2†	24,4 (2,5)	25,3 (3,1)	0,286[c]	0,326
BMI classification				
Normal weight	17 (70,8)	7 (29,2)	0,097[a]	0,468
Overweight	14 (48,3)	15 (51,7)		

n: absolute frequency; %: relative frequency; †mean and standard deviation; [a]: Pearson's chi-square test; [b]: Mann-Whitney U test; [c]: t test of independent samples; Statistical difference: p <0.05; d: effect size. Source: Research data, 2019.

Table 5. Correlation between the visual analogue pain scale and the SBST questionnaire, age and BMI

	VAS	
Variables	r	p
SBST total score†	0,508	<0,001
Age†	0,336	0,014
BMI††	0,225	0,105

†Spearman correlation; ††: Pearson correlation; r: Correlation coefficient; Statistical difference: p <0.05. Source: Research data, 2019.

individuals with moderate/severe pain with an increase in the chances of 2.602 (95% CI 0.83-8, 16) greater back pain compared to the group with mild/moderate pain. In addition, the presence of 54.7% with overweight and an average overall BMI of 24.8 kg/m2 (SD 2.8) is highlighted. The VAS data showed a moderate correlation with the total SBST score and a weak correlation with age. A weak correlation, however without statistical difference, was also observed between BMI and the VAS scale (Table 5).

DISCUSSION

Based on the initial questionnaire, the presence of low back pain was found in 69.2% of the professionals who participated in the first part of the research (initial questionnaire for the selection of individuals). National and international studies have also shown a high prevalence of low back pain in nursing, as Samaei *et al*. (2017) with 69.5%, Yokota *et al*. (2019) with 64.6%, Petersen e Marziale (2014)with 67%, Santos *et al*. (2018), with 71.6%, andMagnago *et al*. (2010) with 71.5%.The present study had an adherence of 77.9% of the subjects who were selected for the research. As for the social-demographic characteristics, it is observed that the sample was composed exclusively of females, with an average age of 32.2 years, single marital status, without the presence of children, white skin color. Yokota *et al*. (2019), found a higher percentage of women (90.9%) with an average age of 33.0 years, as well asYoshimoto *et al*., (2019a), who found that 79.7% of the participants were female and the average age was 31.0 years. Cargnin *et al*. (2019), there was a predominance of females (83.4%), married or in a stable relationship (66.4%) and presence of children (68.1%), with an average age of 41.1 years. In the study bySamaei *et al*. (2017), 31.4% were under 30 years of age, most were women (87.7%) and married (80.7%). Some results found are different from those found in the present research, however it is emphasized that the average age may be one of the factors that explain such differences, since the average was relatively lower than some studies, which can interfere with the other variables analyzed. In addition, statistical analysis showed that pain tends to be more intense with increasing age and married marital status, chances that increased by 5.4 (95% CI 1.57-18.44), and by 3, 5 (95% CI 1.02-11.80), respectively, which strengthens the explanation mentioned above, since the present study also obtained a higher prevalence of mild/moderate pain, single marital status and lower average age. There is a higher prevalence of low back pain in females, as the musculoskeletal loads are modified from pregnancy, child care and double working hours, in addition, women have less muscle and bone mass compared to men (Meucci *et al*., 2015).

Lifestyle did not show any influence on the prevalence of low back pain in the study sample, despite the majority reporting no sleep disturbance and use of medications, especially contraceptives. In addition, it is not a habit to practice physical activity, consumption of tobacco and alcohol in this sample. Yoshimoto *et al*. (2019b) observed statistical difference regarding higher proportions of insomnia in participants with low back pain (p <0.001). Based on this, there is evidence that chronic pain in workers can bring consequences, such as reduced quality of life, unsuccessful treatments, changes in social and leisure life, sleep disorders (insomnia), among other physiological disorders, psychological and social (Garbi *et al*., 2014; Stefane *et al*., 2013). As for work characteristics, there was a predominance of nursing technicians (81.1%), with an average of 80.7 months of working time, most reported working most of the time standing up and did not perform any other paid activity. In the research byCargnin *et al*. (2019), the category of nursing technician corresponded to 79.4%, the highest frequency in terms of years of work was from one to four years (36.5%), most participants (78.4%) had shifts 12 hours, 46.2% during the day and 31.6% at night. In the study by Maciel Júnior *et al*. (2019)it was not possible to observe significant differences in pain in relation to the professional profile. However, it was highlighted that nursing technicians had greater physical and biomechanical risk factors, most likely due to direct patient care (changes in decubitus and patient transfer, personal hygiene, among others) and nurses are more exposed to factors psychosocial risk and cognitive demand, since they perform administrative and bureaucratic functions in the sector. Medeiros *et al*. (2018)found statistical difference when considering the daily working hours (p = 0.026) and the working unit (p = 0.003), demonstrating that the working time does not interfere as much as the presence of repetitive movements of the working hours in the presence of low back pain. Other studies have also assessed labor issues such asSamaei *et al*. (2017), who observed that about 15% worked less than 10 years, only 15.6% worked during the day and 65.1% had a bachelor's degree. As previously mentioned, the present study evaluated daytime workers, but it is worth remembering that night work has specificities that can contribute to the development of low back pain and/or even worsening the condition. In addition, the average number of years of work is conditioned by the age of the sample, another important detail when analyzing labor variables. With regard to anthropometry, 54.7% overweight was observed, with an average BMI of 24.8 (SD 2.8). Cargnin *et al*. (2019), observed a mean BMI of 26.34 kg/m2 (SD 4.54), overweight corresponded to 34.6% of the sample, although there was a predominance of 41.9% of normal weight. In the study by Samaei *et al*. (2017) the BMI investigation showed that 46% of the individuals were overweight.

Ribeiro *et al*. (2019), found a prevalence of 63.8% of overweight among those who had low back pain. In the present study, although the BMI did not show statistical difference, it was noticed that in individuals with moderate/intense weight there is more overweight than those with mild/moderate, which was observed in terms of an increase in the chances of 2.602 (95% CI 0, 83-8.16) of greater low back pain, however this result was not statistically difference. In the study by Malta *et al*. (2017), it was possible to analyze that overweight and obesity are related to back pain. These authors emphasize that being overweight leads to muscle overload, in addition to favoring the appearance of low back pain and herniated discs due to the fact that weight gain predisposes to bone inflammation and spinal disc wear. In addition to the nursing work activity, it already brings with it an overload to the musculoskeletal system, which promotes the appearance of pain and diseases, it is known that normal body weight reduces the pressure in the lumbar vertebrae, and what excess weight can cause in the appearance of chronic spasms in this anatomical area (Meredith *et al*., 2010; Zhang *et al*., 2019).

As for SBST-Brazil, there was a low risk of poor prognosis of low back pain and that workers with medium/high risk have a higher level of pain than those with low risk and that there is an increase in the chances of 7.5 (95% CI 2.08-27.01) greater pain in professionals with medium/high risk. In addition, it was observed that workers with less pain tend to feel better after a day at work and tiredness and exhaustion are more reported by those with moderate/severe pain, increasing the chances by 7.5 (95% CI 2.09- 27.01) for moderate/severe low back pain. Yoshimoto *et al*. (2019b) found that the high SBST score is an independent variable of chronic low back pain that interferes with work. 41.5% of the individuals with disabling low back pain were in the high-risk group, defined as a psychological score ≥4 points, such data suggest that psychological factors (kinesiophobia or somatizing tendency and high SBST-Brazil score) were associated with disabling low back pain in nursing unit workers. In nursing services, screening individuals with a poor low back pain prognosis using SBST can be useful in preventing chronic disabling low back pain. Individuals with low back pain affected by psychosocial factors may complain of several somatic symptoms; therefore, clinicians may need to conduct a careful medical interview about these complaints. In the study by Yokota *et al*. (2019) it was observed that the severity of low back pain in the group with chronic pain was significantly stronger than in the group with acute pain ($p = 0.001$). In addition, the group with chronic low back pain had higher nursing career years ($p < 0.01$) and a tendency to stronger depression ($p < 0.05$) than the other group. In the same sense, Cargnin *et al*. (2019), questioned how the worker feels at the end of the day and found a statistically difference association between low back pain and the feeling of being overwhelmed ($p = 0.001$), moody ($p = 0.000$) and fatigued ($p = 0.002$) Also, after the analysis adjusted for confounding factors (age, sex, marital status, shift, job title, years of work, BMI, time of service, other job), feeling irritable, tired and overwhelmed at the end of the day increased 6.38 (95% CI 2.00 to 20.33), 3.45 (95% CI 1.64-7.25) and 3.13 (95% CI 1.62-6.05), respectively, the odds having back pain.

With regard to the organization of work, the items "the tasks are repetitive" and "work pace is excessive" obtained a severe classification, indicating risk of illness and, therefore, requiring immediate action, just like Samaei *et al*. (2017), who found that organizational variables such as hours of work per week, work shift and work experience are risk factors that increase the incidence of back pain among nursing staff. Some studies have also demonstrated the estimate of the relative risk for low back pain. Yoshimoto *et al*. (2019a) performed univariation logistic regression analysis and age, sleep time, sleep quality, job satisfaction, SBST score, monotonous work, support from a supervisor, fatigue, feeling of high somatizing tendency and kinesiophobia score were significantly associated with chronic low back pain, interfering with work. Multivariate analysis showed that the factors associated with chronic disabling low back pain were high scores in the SBST-Brazil and kinesiophobia and a high somatizing tendency. In a study by Yoshimoto *et al*. (2019b) multivariate analysis showed that insomnia, a previous episode of low back pain and kinesiophobia remained significantly associated with disabling low back pain. In the study by Yokota *et al*. (2019) it was found that only chronic low back pain is related to presenteeism and that there is no relationship between acute low back pain and productivity at work. Like Yoshimoto *et al*. (2019a) who realized that low back pain can interfere with work, leading to decreased productivity, which is an extremely important factor for analysis than just the presence or absence of low back pain (absenteeism). The present study has some limitations, such as the "n" sample, due to the obstacles found in the selection of the subjects, such as workers on vacation or time off, as well as their adherence, because the research is carried out during working hours. work, which can limit the generalization of our results. In addition, because it is a cross-sectional design, the causality of associations cannot be determined. It is also possible that there are other confounding variables that were not assessed in the survey.

CONCLUSION

From the findings, it appears that the profile of nursing workers was composed of women, with a relatively young average age. In the present study, there was a predominance of mild/moderate low back pain. In addition, the association of bio-psychosocial assessment variables with pain intensity is highlighted. There was no statistical difference regarding anthropometric results, however it is worth noting that it is a risk factor that deserves attention.Therefore, it is highlighted that the nursing work process involves several dimensions such as physical, ergonomic, social and psychological and low back pain is multi-factorial, which demonstrates the need for complete and comprehensive assessments, seeking to investigate more than one factor conditioning, as well as the repercussions that this condition can have. Thus, based on more in-depth investigations, it is possible to outline plans and treatments ranging from health promotion to professional rehabilitation.

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