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Sedentary lifestyle in hospitalized patients with cardiovascular diseases

cardiovascular

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RESUMO | Objetivo: analisar a prevalência e a relação entre o diagnóstico de enfermagem estilo de vida sedentário, seus componentes diagnósticos e as características sociodemográficas e clínicas em pacientes hospitalizados com afecções cardiovasculares. Método: Estudo transversal, realizado com pacientes hospitalizados com afeccções cardiovasculares. A coleta de dados se deu por um instrumento contendo dados sociodemográficos, clínicos e componentes do diagnóstico, os quais foram analisados por testes estatísticos. Resultados: Inferiu-se prevalência do diagnóstico em 84,1% da amostra, com as características definidoras: falta de condicionamento físico (93,2%), média de atividade física diária inferior à recomendada para idade e sexo (86,4%) e preferência por atividade com pouca atividade física (59,1%) e fatores relacionados: treinamento insuficiente para fazer exercício físico (45,5%) e interesse insuficiente para a atividade física (43,2%). Conclusão: O sedentarismo é prevalente em pacientes com afecções cardiovasculares e pode ser desencadeado pelo baixo interesse na realização de atividade física.
Descritores: Diagnóstico de Enfermagem; Comportamento Sedentário; Doenças Cardiovasculares.

ABSTRACT | Objective: to analyze the prevalence and relationship between the nursing diagnosis sedentary lifestyle, its diagnostic components and sociodemographic and clinical characteristics in hospitalized patients with cardiovascular conditions. Method: Cross-sectional study, carried out with patients hospitalized with cardiovascular conditions. Data were collected using an instrument containing sociodemographic and clinical data and diagnostic components, which were analyzed using statistical tests. Results: Prevalence of the diagnosis was inferred in 84.1% of the sample, with the defining characteristics: lack of physical conditioning (93.2%), average daily physical activity lower than recommended for age and gender (86.4%) and preference for activity with little physical activity (59.1%) and related factors: insufficient training to do physical exercise (45.5%) and insufficient interest in physical activity (43.2%). Conclusion: Sedentary lifestyle is prevalent in patients with cardiovascular diseases and can be triggered by low interest in performing physical activity.
Keywords: Nursing Diagnosis; Sedentary Behavior; Cardiovascular diseases.

RESUMEN | Objetivo: analizar la prevalencia y la relación entre el diagnóstico de enfermería sedentarismo, sus componentes diagnósticos y las características sociodemográficas y clínicas en pacientes hospitalizados con condiciones cardiovasculares. Método: Estudio transversal, realizado con pacientes hospitalizados con condiciones cardiovasculares. Los datos fueron recolectados a través de un instrumento que contenía datos sociodemográficos, clínicos y componentes diagnósticos, que fueron analizados mediante pruebas estadísticas. Resultados: Se infirió prevalencia del diagnóstico en el 84,1% de la muestra, con las características definidoras: falta de acondicionamiento físico (93,2%), actividad física diaria promedio inferior a la recomendada para edad y sexo (86,4%) y preferencia por actividad con poca actividad física (59,1%) y factores relacionados: insuficiente formación para hacer ejercicio físico (45,5%) e insuficiente interés por la actividad física (43,2%). Conclusión: El sedentarismo es prevalente en pacientes con enfermedades cardiovasculares y puede ser desencadenado por el bajo interés por realizar actividad física.
Palabras claves: Diagnóstico de Enfermería; comportamiento sedentario; Enfermedades cardiovasculares.

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INTRODUCTION

Chronic non-communicable diseases (NCDs) are a global health problem and a threat to human health and development. They present epidemic proportions throughout America and favor population morbidity and mortality. [1] In 2017, 28.8% of all deaths in the world were related to CNCDs. [2] Among these, cardiovascular diseases (CVD) stand out as the main cause of death.

In the world, it is estimated that 17.7 million people died from cardiovascular dise-

ases in 2015, representing 31% of all deaths globally. More than three-quarters of deaths from cardiovascular disease occur in low- and middle-income countries. [3] It is noteworthy that cardiovascular diseases (CVD) are the main causes of death in women and men in Brazil. [4]

In addition to premature deaths, CVDs are responsible for the inability to carry out activities related to professional practice, reduced family income and decreased productivity. Therapeutic interventions for cardiovascular diseases are long-lasting, thus overloading the person with the disease, their family members and the health service. The value referring to hospitalizations for cardiovascular diseases is considered the highest among the causes of hospitalizations in Brazil. [5]

The three main causes of death identified in Brazil are acute myocardial infarction, strokes and heart failure. It is known that there is no single cause for cardiovascular diseases, but there are factors that increase the probability of occurrence of these conditions, such as high blood pressure, smoking, diabetes mellitus, stress, insomnia, sedentary lifestyle and obesity. [6]

Among these factors, sedentary behavior stands out, a problem that should receive greater attention from the nursing team, with a view to establishing preventive measures or measures that minimize the occurrence of such a factor. This risk factor is also classified as a nursing diagnosis as established by NANDA International. [7] In samples of patients with cardiovascular conditions, the diagnosis Sedentary lifestyle was identified with a prevalence above 50%. [8-9]

Thus, in view of the data presented and considering the great demand of individuals affected by cardiovascular diseases in the Brazilian context, as well as the unfavorable interference that risk factors cause in the health of these people, it is important to carry out studies that seek to know the prevalence of sedentary behavior, with a view to better management in the implementation of preventive measures in patients with cardiovascular diseases.

Furthermore, we aim to verify whether there is any defining characteristic, factor re-lated to sedentary lifestyle or sociodemographic or clinical variable of individuals with cardiovascular problems that present a more expressive relationship. The literature points out that the etiological factors physical inactivity and average physical activity lower than recommended for age and sex are the most prevalent in adolescents and adults. [10]

According to the literature, in adolescents, the factors associated with an increased probability of developing the nursing diagnosis of a sedentary lifestyle are: poor knowledge about the benefits that physical activity brings to health and/or about the consequences of a sedentary lifestyle, lack of resources for the practice of physical exercise, insufficient training to do physical exercise and activity intolerance. [11]

Inferring the statistical relationship between the diagnosis and its associated factors allows interventions to be carried out in order to interrupt the ND development cycle, thus, when considering that the epidemiological data of NCDs have a significant expression in adults, the need to investigate these relationships in this population is evident, given that these data will help nurses to intervene with greater accuracy in this clientele, with a view to reducing the rates of sedentary lifestyle in the population.

Thus, in view of the above, it is considered relevant to carry out this study, with a view to a better understanding of the magnitude of sedentary lifestyle in Brazil. Therefore, the objective was to analyze the prevalence and the relationship between the nursing diagnosis of sedentary lifestyle, its diagnostic components and sociodemographic and clinical characteristics in hospitalized patients with cardiovascular conditions.

METHOD

This is a cross-sectional study, with a quantitative approach, carried out in a teaching hospital, located in the interior of Northeast Brazil.

The population consisted of patients with cardiovascular conditions who were hospitalized in the aforementioned unit. The sample was determined by the formula developed for studies with an infinite population: n = Zα2 * P * Q/E2. Where the confidence level of the study was 95% (Zα = 1.96); the sampling error was 5%; and the prevalence of the event was considered to be 3%. The final sample consisted of 44 patients.

The inclusion criteria adopted for the patients participating in the study were: having a confirmed diagnosis of cardiovascular disease and being over 18 years of age. Patients who did not have physical and psychological conditions to participate in data collection were excluded. The sampling process was for convenience, of the consecutive type.

Data collection took place from December 2019 to March 2020, based on an instrument composed of sociodemographic and clinical data, defining characteristics and factors related to a sedentary lifestyle. The instrument was constructed by the researcher using the defining characteristics as a source (Reports choice of a daily routine without physical exercises, reports lack of physical conditioning, Verbalizes preference for activities with little physical exercise) and related factors (Poor knowledge about the benefits that physical activity brings to health, Lack of interest, Lack of motivation, Lack of resources, Reports lack of training to do physical exercise) of the sedentary lifestyle diagnosis present in the NANDA International. [7] Conceptual and operational definitions were built to support the measurement of variables in the collection. [7] Data were collected from direct interviews with patients.

The collected data were organized in Microsoft Excel spreadsheets. The defining characteristics and related factors of the sedentary lifestyle were grouped as present or absent for each patient in spreadsheets, and from this grouping, the diagnostic inference of the sedentary lifestyle for each patient was performed by the researcher of this study. Subsequently, these data were analyzed using IBM SPSS Statistic version 25.0 for Windows, in order to verify the prevalence of a sedentary lifestyle and its components, applying descriptive statistics to assess relative and absolute frequencies.

Numerical variables referring to sociodemographic and clinical data were analy-

zed using measures of central tendency and dispersion, which had their normality tested using the Shapiro-Wilk test, adopting a value of p < 0.05. Inferential statistics were performed using the Chi-square, Mann-Whitney U and Fisher Exact Tests. This analysis allowed the verification of the statistical association between the sedentary lifestyle, the components of the studied diagnosis and the sociodemographic and clinical data, adopting a value of p < 0.05.

In compliance with Resolution 466/2012 (12) defining the guidelines and regulatory norms for research involving human beings, this research was approved by the Research Ethics Committee of a State University of Rio Grande do Norte, under opinion number 3,234,418 and CAAE: 09005819.9.0000.5294.

RESULTS

Forty-four patients with cardiovascular conditions participated in the study, 54.5% female, with a mean age of 63 years. As for marital status, 61.4% had a partner, 52.3% considered themselves white and 84.1% practiced some religion. The average number of years of study was six years, and the family income was two minimum wages.

As for clinical data, most of the interviewees did not consume alcohol and/or cigarettes, had a median hospital stay of three days, with an average weight of 75 kg, height of 1.61 cm, Body Mass Index (BMI) of 28 and abdominal circumference of 104 cm.

Table 1 shows the frequency of the nursing diagnosis sedentary lifestyle and its diagnostic components in patients with cardiovascular problems.

The sedentary lifestyle was prevalent in the researched sample. This diagnosis was confirmed by the presence of the three defining characteristics in more than half of the patients surveyed. Among the most prominent related factors were: insufficient training to do physical exercise (45.5%) and insufficient interest in physical activity (43.2%).

Table 2 shows the association between a sedentary lifestyle and its diagnostic indicators in patients with cardiovascular diseases.

As evidenced in Table 2, the nursing diag-

nosis of sedentary lifestyle was significantly associated with the mean characteristic of daily physical activity lower than recommended for age and sex and the causal factor insufficient interest in physical activity.

Finally, Table 3 shows the association between the sedentary lifestyle diagnosis and sociodemographic and clinical characteristics.

According to the results in Table 3, the nursing diagnosis sedentary lifes-

tyle did not present a significant association with any sociodemographic or clinical factor.

DISCUSSION

According to the results of this study, the nursing diagnosis of a sedentary lifestyle (SL) was highly prevalent among patients. These data are similar to another study, in which 56.1% of

Table 1 – Prevalence of the nursing diagnosis sedentary lifestyle and its diagnostic indicators in patients with cardiovascular diseases. 2021.

Variables	n	%
Nursing Diagnoses		
Sedentary lifestyle	37	84,1
Defining characteristics		
Lack of physical conditioning	41	93,2
Average daily physical activity lower than recommended for age and sex	38	86,4
Preference for an activity with little physical effort	26	59,1
Related factors		
Insufficient training to do physical exercise	20	45,5
Insufficient interest in physical activity	19	43,2
Insufficient motivation for physical activity	13	29,5
Insufficient resources for physical activity	11	25,0
Insufficient knowledge about the health benefits associated with exercise Physical	08	18,2

Source: Prepared by the authors.

Table 2 – Distribution of the association between the nursing diagnosis sedentary lifestyle and its diagnostic indicators in patients with cardiovascular diseases. 2021.

Sedentary lifestyle	Valor p
Defining characteristics	
Lack of physical conditioning	$0,061^2$
Average daily physical activity lower than recommended for age and sex	$0,000^2$
Preference for an activity with little physical effort	$0,103^2$
Related factors	
Insufficient knowledge about the health benefits associated with physical exercise	$0,318^2$
Insufficient interest in physical activity	$0,014^2$
Insufficient motivation for physical activity	$0,654^2$
Insufficient resources for physical activity	$0,659^2$
Insufficient training to do physical exercise	$0,428^2$

Source: Prepared by the authors.
Caption: 1 Pearson's Chi-Square; 2 Fisher's exact test.

patients with acute coronary syndrome had the diagnosis in question.[13] It also corroborates what was found in a mapping of 7,190 medical records, in which 23% of these were related to patients with cardiovascular conditions, among which 60.5% of patients had SL. [14]

Lack of physical conditioning was the most prevalent defining characteristic of the sedentary lifestyle nursing diagnosis in this study. This result corroborates the research carried out with patients with SAH, in which this same characteristic was present in 73.7% of the interviewees. [15] Due to the absence of physical exercise, the individual decreases the musculoskeletal and metabolic functioning resulting in the loss of muscle strength, cardiovascular resistance and flexibility, making him unable to practice physical exercise. [16]

Still regarding the defining characteristics, the second most prevalent in this study was the average daily physical activity below the recommended for age and gender, even presenting a significant association. According to the Physical Activity Guide for the Brazilian population, in accordance with the World Health Organization (WHO) guidelines for physical activity and sedentary behavior, adults should perform around 150 to 300 minutes of moderate physical activity per week, or 75 minutes of vigorous activity, with the possibility of combining these two modalities, for at least 2 days a week, regardless of gender. [4,17] However, despite the recommendations that have existed for a long time by national and global health bodies, most of the population does not follow what is recommended, especially young adults. [18]

According to research carried out with elderly Brazilians, the age group prevalent in this study, this public becomes more fragile when they report not performing or decreasing levels of physical activity. The reduction in these physical exercises is related to the

time spent performing the activity and changes in the routine of this public. Thus, the restriction of physical exercises causes the weakening of the musculoskeletal system, reflecting in the decrease in muscle strength and even in balance. [16] An adult who meets the recommended levels of physical activity can prevent about 30% of the risk of death from numerous causes, especially those related to cardiovascular conditions. [19]

Finally, the defining characteristic preference for exercises with little physical activity is in agreement with a Brazilian study, carried out with hypertensive patients, indicating a prevalence of 98.4% (20) and what was found in a study with patients with acute coronary syndrome, corresponding to 53.6% of this population. [13]

By preferring to perform exercises with little activity, the individual increases the risks of having a sedentary lifestyle. [20] According to research carried out by the Ministry of Health, walking is the physical activity most performed by Brazilians. This choice occurs because it is a free practice that does not generate costs for the individual, in addition to not requiring skills to be carried out. [21]

The related factors that presented the highest prevalence were insufficient training to do physical exercise and insufficient interest in physical activity. Similar results were pointed out in another research, reporting that both factors increase the probability of the patient developing the ND sedentary lifestyle, since, if the individual does not have adequate instructions, by physical educators to perform exercises, it is presumable that they do not develop interest in exercising, increasing the barrier to performing physical exercise. People with cardiovascular conditions who have this factor tend to have a great deal of difficulty in carrying out non-pharmacological treatment. [20]

Furthermore, insufficient interest

in physical activity was significantly associated with a sedentary lifestyle. This factor is related to insufficient motivation to perform exercises, given that physical activity does not arouse interest and curiosity in the individual. [10] The individual who has no interest in performing physical activity will probably not meet the average daily exercise recommended for age and gender. [17]

Insufficient interest in physical activity is prevalent in nearly all EVS populations. The literature points it out in the nursing team (43.5%) [22], in people with high blood pressure (28%) [20] and in quilombola women. [23]

CONCLUSION

It is concluded that the nursing diagnosis sedentary lifestyle is prevalent in patients hospitalized with cardiovascular diseases. The defining

Table 3 – Distribution of the association between the nursing diagnosis sedentary lifestyle and sociodemographic/clinical variables in patients with cardiovascular diseases. 2021.	
Sedentary lifestyle	
Sociodemographic variables	**Valor p**
Gender	0,428[2]
Marital Status	0,089[2]
Religion	0,575[2]
Smoking	0,575[2]
Alcohol intake habits	1,000[2]
Age	0,489[3]
Years of study	0,550[3]
Family income	0,802[3]
Clinical variables	
Length of stay	0,826[3]
Weight	0,875[3]
Height	0,360[3]
Body mass index	0,550[3]
Abdominal circumference	0,925[3]

Source: Prepared by the authors.
Caption: 1 Pearson's chi-square; 2 Fisher's exact test; 3 Mann-Whitney U.

characteristic of average daily physical activity lower than recommended for age and sex and the related factor insufficient interest in physical activities were significantly associated with the diagnosis. Sociodemographic and clinical factors were not significantly associated with a sedentary lifestyle.

Given the results, we emphasize the need to publicize and promote educational activities as an alternative to reducing the sedentary lifestyle that can be both a cause and a consequence of cardiovascular diseases. The initiative to promote an active lifestyle must be carried out based on the articulation between public policies and primary health care. This service acts as an individual's gateway to the health system, enabling a link between the multidisciplinary team and the needs of the community.

In this perspective, the nurse plays a mediating role, promoting the necessary knowledge for the population to understand the responsibility of exercising self-care, preventing the emergence of comorbidities that result in a sedentary lifestyle. Therefore, the care plan carried out in primary care reduces the number of sedentary patients, reflected in the decrease in hospital admissions, as well as in the funds allocated to this demand. Therefore, it is necessary to highlight the importance of evaluating sedentarism also in primary care and implementing interventions.

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