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ASSOCIATION BETWEEN SLEEP AND QUALITY OF LIFE IN THE ELDERLY POPULATION WHO IS SERVED IN PRIMARY CARE IN JABOATÃO DOS GUARARAPES

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1

Abstract: According to the World Health Organization, sleep disorder is considered a public health issue, where about half of the elderly population demonstrates disorders in the sleep/wake cycle. Considering that sleep is one of the pillars of quality of life, this study aims to evaluate the profile of the population under study in Primary Health Care. Moreover, the research will be carried out in health units in the municipality of Jaboatão dos Guararapes, where inclusion and exclusion criteria will be applied to better clarify the subject. Therefore, it is expected to increase the scientific performance of the respective municipality, as well as to develop and disseminate projects and didactic material for the elderly population, their family members and health professionals linked to the theme.

Keywords: Elderly, Sleep, Primary Health Care**.**

INTRODUCTION

The world is aging and along with this new reality, new demands arise. For the aging process to be experienced in a healthy way, some lifestyle habits and personal perceptions must be well evaluated. In this context, the quality of life and sleep of elderly people are indicators of great importance for this analysis.

The presence of comorbidities in this population is not uncommon, as well as polypharmacy, which, as expected, is accompanied by side effects and may interfere with complaints related to the objective of this study, mentioned during medical consultations. It is worth noting that not all causes of poor quality of life or sleep are related to these causes, which is why a study focused on the specific topic is of great relevance.

As a way to better understand the relationship between quality of life, sleep and health of the elderly, this study sought to evaluate through an interview involving validated quality of life instruments, a biopsychosocial questionnaire, including questions about self-reported sleep quality, social data and comorbidities present in treatment, of elderly users registered and monitored by Primary Health Care in Jaboatão dos Guararapes, in Pernambuco, by the multidisciplinary team.

Therefore, as a product of this study, health education actions will be planned in the communities of this municipality, as well as the presentation of collective results to teams and at scientific events, aiming at health education as a tool for good practices and healthy longevity.

THEORETICAL FRAMEWORK

According to the World Health Organization, every person aged 60 or over is considered elderly and, in 2025, Brazil will reach 32 million citizens in this age group, thus occupying 6th place in the world in number of elderly people (ELDERLY STATUS, 2013). Therefore, due to the increase in life expectancy in recent years, the guarantee of providing these people with prosperous aging in different social scenarios is evident, especially in their quality of life. (SARAIVA et al, 2017).

Concomitant to what was exposed previously and given the epidemiological scenario influenced by aging, there has been an expansion of problems related to sleep, as it has become a common complaint among the elderly, mainly in Primary Health Care, a service that receives a large part of the public in question (SILVA et al, 2017. MORENO et al, 2018). Thus, in response to the association with the age group under debate, physiological and pathological changes in sleep result in a worse quality of life, as well as cognitive and mental health problems (VANDERLINDEN et at, 2020).

As it is a basic human need, a regular sleep pattern is extremely important in terms of quality of life, especially in people aged 60 or over, as it is an indicator of vitality, as well as -physical, emotional, cognitive and physiological well-being (OHAYON et al, 2017). Therefore, it is crucial to seek strategies that provide benefits for sleep hygiene in the elderly, which also reduce changes in this population.

Given this scenario, this study aims to research the main reasons that are associated, directly and indirectly, with the quality of sleep in elderly people cared for in Health Units in the city of Jaboatão dos Guararapes, as well as measuring the reasons that affect, concomitantly, the well-being of people in this age group.

HYPOTHESES

a) Elderly people with a regular sleep-wake cycle have a better quality of life.
b) Elderly people with an irregular sleep-wake cycle have a deficit in quality of life.

OBJECTIVES

GENERAL

To describe the profile of the elderly population served in Primary Health Care in the municipality of Jaboatão dos Guararapes.

SPECIFICS

a) Assess the quality of sleep (self-reported) of the elderly.
b) Assess the quality of life of the elderly.
c) Relate sleep quality to comorbidities.
d) Prepare a schedule of health education activities with the assistant team.

METHODOLOGY

TYPE AND LOCATION OF STUDY

The study was developed in the Family Health Units in the Municipality of Jaboatão dos Guararapes, between January and May 2023, through a cross-sectional epidemiological study. Among the advantages of this type of study are the ease of carrying out, the low cost and the objectivity in data collection. On the other hand, the difficulty in determining the absolute risk and duration of the disease, inferring causality and investigating low prevalence conditions are some of its limitations (FREIRE & PATTUSSI, 2018).

STUDY POPULATION

The population was made up of people aged 60 years or over, of both sexes, attended at the Health Units of the Municipality of Jaboatão dos Guararapes.

INCLUSION CRITERIA

- People aged 60 or over.
- Elderly people with voluntary participation;
- Elderly people without cognitive impairment.

EXCLUSION CRITERIA

- People under 60 years of age.
- Elderly people who refuse to participate voluntarily.
- Elderly people with cognitive impairment.
- Elderly people using sleep-inducing or similar medication.

DATA COLLECT

The research began after approval by the Research Ethics Committee of ``*Faculdade Tiradentes*`` in Jaboatão dos Guararapes, the signing of the Free and Informed Consent Form and the prior authorization of the letter of consent from the Health Department of the municipality of Jaboatão dos Guararapes for free access. to users registered and monitored in Family Health Units.

Concomitant to the above, the collection took place using two biopsychosocial questionnaires, with people aged 60 years or over, without cognitive impairment and who voluntarily participate in the research.

The interview was carried out on the premises of the Health Units of the Municipality of Jaboatão dos Guararapes, in a private room, with only the presence of the researcher and the interviewee. The user answered questions from the questionnaire prepared by the author of this work aimed at the quality of sleep in the elderly, as well as the one carried out by the World Health Organization called WHOQOL-OLD, to assess the quality of life in elderly adults, namely:

• Biopsychosocial Questionnaire (APPENDIX A)

• WHOQOL-OLD questionnaire (ANNEX A)

BIOPSYCHOSOCIAL QUESTIONNAIRE (APPENDIX A)

Instrument prepared by the researcher, which consists of a questionnaire with information about age, gender, education, medications in use, comorbidities, sleep quality and physical activity practice.

WHOQOL-OLD QUESTIONNAIRE (ANNEX A)

An instrument developed by the World Health Organization, the World Health Organization Quality of Life for Old (WHOQOL-OLD) consists of 24 questions and its answers follow a Likert scale (from 1 to 5) that can quantify the perception of the general state of health, providing a complete analysis of the social, emotional and functional aspects of the elderly population.

ETHICAL ASPECTS

The research began after analysis and approval by the Research Ethics Committee of ``*Faculdade Tiradentes*``, as well as authorization of the letter of consent from the Health Department of the municipality of Jaboatão dos Guararapes. Individuals aged 60 years or over expressed their authorization to participate in the research by reading, compressing and signing a Free and Informed Consent Form for those over 18 years of age, which will be offered in the form of an invitation, and the document will be prepared based on data provided by the Research Ethics Committee of ``*Faculdade Tiradentes*`` in the municipality of Jaboatão dos Guararapes.

CRITICAL ANALYSIS OF RISKS AND BENEFITS FOR THE RESEARCHED

In this research, the presence of a risk of embarrassment on the part of the interviewee in answering the biopsychosocial questionnaires can be considered. This way, such intimidation can be alleviated only with the presence of the researcher, in a private place.

In contrast to what was previously stated, the benefits of this research will include identifying the factors associated with sleep quality in the elderly population and thus turning the information into educational activities to inform the target population.

STATISTICAL ANALYSIS

The data were analyzed descriptively using absolute frequencies and percentages for categorical variables and measurements: mean, standard deviation (mean ± SD) and median and the 25th and 75th percentiles (median (P25; P75)) for numerical variables. For comparison between categories in relation to numerical variables (domains and total score of the WHOQOL-OLD scale) the Mann-Whitney test was used in the case of two categories and the F (ANOVA) or Kruskal-Wallis test in the case of more than two categories.

To analyze the significant association between two categorical variables, Pearson's Chi-square test or Fisher's Exact test was used when the condition for using the Chi-square test was not verified.

The F test (ANOVA) was chosen in situations where the data presented a normal distribution in each category and the Mann-Whitney and Kruskal-Wallis tests in the case of rejection of normality. Normality was checked using the Shapiro-Wilk test and the margin of error used in the statistical tests was 5%. The values were entered into the EXCEL spreadsheet and the program used to obtain the statistical calculations was IMB SPSS version 25.

RESULTS AND DISCUSSION

The topic of sleep throughout the aging process is of great relevance when the focus is quality of life. According to Moreno et al (2019), promoting the health of elderly people is the first step towards improving their quality of sleep. The present study found a higher prevalence of sleep disorders among the elderly interviewed, with approximately 61% of the target audience reporting waking up during the night, not sleeping well or taking a long time to fall asleep.

Sleep is classified as a physiological and essential factor in life and the reduction in its quality for a sustainable period of time becomes a factor that culminates in the appearance of diseases such as cognitive and cardiovascular diseases, as well as their worsening (ALVES et al, 2020).

Among the most prevalent comorbidities in this population, Systemic Arterial Hypertension (SAH) was present in 62% of the elderly. SAH is the main risk factor for death among non-communicable diseases and shows a direct relationship with cardiovascular risk. However, despite progress in prevention, diagnosis, treatment and control, it is still an important public health problem.

This study included interviews with 129 people, who fully met the inclusion criteria. Data collection presented results categorized by age, sex, medications used and comorbidities.

The age range of the elderly analyzed ranged from 60 to 90 years, with a mean of 68.32 years, standard deviation of 7.27 years and median of 67.00 years.

Table 1 presents the results regarding demographic profile, medication use and comorbidities. From this table it is highlighted that the majority (65.1%) were 60 to 69 years old, followed by the following groups: 70 to 79 years old (27.1%), 80 to 89 (7.0%) and only one (0.8 remaining %) were 90 years old; the majority (70.5%) were female; the majority (71.3%) were taking medication; the most frequent comorbidities were: arterial hypertension (62.0%), followed by those with diabetes mellitus (21.7%) and the comorbidities: neurological, vascular and cardiac present were recorded respectively in 3.9%, 2.3% and 3.9%.

Variable	number (%)
TOTAL	**129 (100,0)**
Age range (years)	
60 to 69	84 (65,1)
70 to 79	35 (27,1)
80 to 89	9 (7,0)
90	1 (0,8)
Sex	
Masculine	38 (29,5)
Feminine	91 (70,5)
Medication use	
Yes	92 (71,3)
Not	37 (28,7)
Comorbidities:	
HAS	
Yes	80 (62,0)
Not	49 (38,0)
DM	
Yes	28 (21,7)
Not	101 (78,3)
Neurological	
Yes	5 (3,9)
Not	124 (96,1)
Vascular	
Yes	3 (2,3)
Not	126 (97,7)
Cardiac	
Yes	5 (3,9)
Not	124 (96,1)

Table 1: Assessment of demographic profile, medication use and comorbidities.

Source: Author, 2023

Table 2 illustrates the results of questions related to sleep quality and physical activity. From this table it is possible to verify that: in the question "Regarding the quality of your sleep, do you mention that:" the lowest percentage (27.8%) said "Does not sleep well" and the percentages in the other two categories "Sleep well all night " and "Sleep well but wake up at night" were 39.5% and 32.6% respectively; Furthermore, approximately half of those interviewed (50.4%) reported having daytime drowsiness; the majority (69.8%) stated that they wake up willing, 29.5% wake up feeling unwell and for one (0.8%) a lack of said information

was recorded. Regarding the question "How long have you noticed sleep irregularity?" the majority (55.0%) responded that it was more than a year ago, the others cited less than a year (25.6%) and for 19.4% the information was absent. Finally, the practice of physical activity was mentioned by 38.0% of participants.

Variable	n (%)
TOTAL	**129 (100,0)**
REGARDING THE QUALITY OF YOUR SLEEP, YOU REFER THAT:	
Sleep well all night	51 (39,5)
Sleeps well, but wakes up at night	42 (32,6)
Doesn't sleep well	36 (27,9)
DO YOU EXPERIENCE DAYTIME DREAMYNESS?	
Yes	65 (50,4)
No	64 (49,6)
YOU THINK YOU AGREE:	
Willing	90 (69,8)
Unwell	38 (29,5)
Uninformed	1 (0,8)
HOW LONG HAVE YOU NOTICED IRREGULARITY IN YOUR SLEEP?	
Less than 1 year	33 (25,6)
More than 1 year	71 (55,0)
Uninformed	25 (19,4)
DO YOU PRACTICE PHYSICAL ACTIVITY?	
Yes	49 (38,0)
Not	80 (62,0)

Table 2 – Assessment of issues related to sleep quality and physical activity

Source: Author, 2023

Table 3 shows the results related to sleep quality according to each of the variables: age group, sex and physical activity. In this table, although no significant association was found ($p > 0.05$), the percentage of those who said they slept well at night was higher among those who practiced physical activity compared to those who did not practice (49.0% x 33.8%), while the percentage of those who said they did not sleep well was higher among those who did not practice than those who practiced physical activity (35.0% x 16.3%).

Variable	Sleep well all night n (%)	Sleep well, but wake up at night n (%)	Doesn't sleep well n (%)	Value p
Age range				**p (1) = 0,623**
60 to 69	31 (36,9)	29 (34,5)	24 (28,6)	
70 to 79	14 (40,0)	10 (28,6)	11 (31,4)	
80 to 90	6 (60,0)	3 (30,0)	1 (10,0)	
Sex				**p (2) = 0,270**
Masculine	18 (47,4)	13 (34,2)	7 (18,4)	
Feminine	33 (36,3)	29 (31,9)	29 (31,9)	
Practice physical activity				
Yes	24 (49,0)	17 (34,7)	8 (16,3)	**p (2) = 0,058**
Not	27 (33,8)	25 (31,3)	28 (35,0)	

Table 3– Results of the question on sleep quality according to the variables: gender and age group and physical activity

(1) Fisher's Exact Test.

(2) Pearson's Chi-square test

Source: Author, 2023

According to a study carried out by DumithI et al (2019), it was concluded that sleep also showed a positive association with physical activity, assuming that individuals who sleep more are also more careful about their health. Therefore, changes in sleep are common in the elderly and some risk factors can aggravate this condition. Therefore, understanding the association of sedentary behavior with a history of sleep problems can help in the development of intervention programs (CANEVER et al, 2022).

Table 4 displays the results of the WHOQOL-OLD question where it is highlighted that: the highest percentage or majority corresponded to the answer "Nothing" in the questions: "Q6, in relation to the question "How worried are you about the way you will die?", with 57.4%, "Q8. How afraid are you of dying?" (54.3%), "Q7. How afraid are you of not being able to control your death?" (53.5%), "Q2. To what extent does the loss of, for example, hearing, vision, taste, smell, touch affect your ability to participate in activities?" (48.8%), "Q10. To what extent does the functioning of your senses (e.g. hearing, sight, taste, smell, touch) affect your ability to interact with other people?" (45.0%) and "Q1. To what extent do losses in your senses (e.g. hearing, vision, taste, smell, touch) affect your daily life?" (39.5%) and "Q9. How much do you fear suffering pain before you die?" (31.8%); Furthermore, the majority or highest percentages corresponded to the "Extremely" and "Very much" categories in the questions: "Q24. To what extent do you have opportunities to be loved?", with 55.8% and 34.1% respectively; "Q23. To what extent do you have opportunities to love?" with values (51.9% and 38.8%), "Q22. To what extent do you feel love in your life?" (50.4% and 31.8%) and "Q3. How much freedom do you have to make your own decisions?" the percentages were 49.6% and 36.4%. In questions Q4 and Q5, Q15 to Q18 and Q21, the percentages in the categories "Extremely" and "Quite", or "Very satisfied" or "Satisfied" varied from 25.5% to 43.4%. In topics Q11 to Q14, the high percentages corresponded to the "Quite a lot" category, with values ranging from 42.6% to 48.8%; In question Q18, the two highest percentages were attributed to the Satisfied!" (31.8%) and "Neither satisfied nor dissatisfied" (28.7%) and in topics Q19 and Q20 the categories "Happy" and "Neither happy nor unhappy" with percentages that varied from 27.9% to 33.3%.

Table 5 presents the statistics of the WHOQOL-OLD domains where it can be seen that the highest average corresponded to the intimacy domain (80.18) and in the other domains the averages ranged from 68.51 (Social participation) to 72, 92. This way, the variability expressed by the standard deviation values was reduced in the domains: autonomy, past, present and future activities, social participation, intimacy and total scale score since said measure was less than 1/3 of

Question	Nothing n (%)(1)	Only a little n (%)(1)	So so n (%)(1)	A lot n (%)(1)	Extremely n (%)(1)
Q1. To what extent do losses in your senses (e.g. hearing, vision, taste, smell, touch) affect your daily life?	51 (39,5)	19 (14,7)	30 (23,3)	19 (14,7)	10 (7,8)
Q2. To what extent does the loss of, for example, hearing, vision, taste, smell, touch affect your ability to participate in activities?	63 (48,8)	23 (17,8)	21 (16,3)	14 (10,9)	8 (6,5)
Q3. How much freedom do you have to make your own decisions?	3 (2,3)	3 (2,3)	12 (9,3)	47 (36,4)	64 (49,6)
Q4. To what extent do you feel you control your future?	18 (14,0)	14 (10,9)	18 (14,0)	33 (25,6)	46 (35,7)
Q5. How much do you feel that the people around you respect your freedom?	4 (3,1)	6 (4,7)	16 (12,4)	47 (36,4)	56 (43,4)
Q6. How worried are you about the way you will die?	74 (57,4)	29 (22,5)	11 (8,5)	8 (6,2)	7 (5,4)
Q7. How afraid are you of not being able to control your death?	69 (53,5)	25 (19,4)	18 (14,0)	13 (10,1)	4 (3,1)
Q8. How afraid are you of dying?	70 (54,3)	19 (14,7)	17 (13,2)	15 (11,6)	8 (6,2)
Q9. How much do you fear suffering pain before you die?	41 (31,8)	16 (12,4)	32 (24,8)	19 (14,7)	21 (16,3)
Q10. To what extent does the functioning of your senses (e.g. hearing, sight, taste, smell, touch) affect your ability to interact with other people?	58 (45,0)	19 (14,7)	29(22,5)	14 (10,9)	9 (7,0)
Q11. To what extent can you do the things you would like to do?	4(3,1)	13(10,1)	29(22,5)	58(45,0)	25(19,4)
Q12. To what extent are you satisfied with your opportunities to continue achieving other achievements in your life?	3(2,3)	11(8,5)	28 (21,7)	55 (42,6)	32 (24,8)
Q13. How much do you feel you have received the recognition you deserve in your life?	7 (5,4)	4 (3,1)	35 (27,1)	55 (42,6)	28 (21,7)
Q14. To what extent do you feel you have enough to do each day?	1 (0,8)	9 (7,0)	19 (14,7)	63 (48,8)	37 (28,7)

Question	Very instatisfied n (%)(1)	Instatisfied n (%)(1)	Neither dissatisfied nor satisfied n (%)(1)	Satisfiedn n (%)(1)	Very Satisfied n (%)(1)
Q15. How satisfied are you with what you have achieved in your life?	-	10 (7,8)	11 (8,5)	52 (40,3)	56 (43,4)
Q16. How satisfied are you with the way you use your time?	2 (1,6)	14 (10,9)	21 (16,3)	50 (38,8)	42 (32,6)
Q17. How satisfied are you with your activity level?	7 (5,4)	21 (16,3)	17 (13,2)	46 (35,7)	38 (29,5)
Q18. How satisfied are you with the opportunities you have to participate in community activities?	6 (4,7)	22 (17,1)	37 (28,7)	41 (31,8)	23 (17,8)

Question	Very unhappy n (%)(1)	Unhappy n (%)(1)	Neither unhappy nor happy n (%)(1)	Happy n (%)(1)	Very happy n (%)(1)
Q19. How happy are you with the things you can expect going forward?	7 (5,4)	6 (4,7)	43 (33,3)	43 (33,3)	30 (23,3)

Question	Very bad n (%)(1)	Bad n (%)(1)	Neither good, nor bad n (%)(1)	Good n (%)(1)	Very good n (%)(1)
Q20. How would you evaluate the functioning of your senses (for example: hearing, vision, taste, smell, touch)?	10 (7,8)	10 (7,8)	43 (33,3)	36 (27,9)	30 (23,3)

Question	Nothing n (%)(1)	Only a little n (%)(1)	So so n (%)(1)	A lot n (%)(1)	Extremely n (%)(1)
Q21. To what extent do you have a sense of companionship in your life?	12 (9,3)	6 (4,7)	19 (14,7)	47 (36,4)	45 (34,9)
Q22. To what extent do you feel love in your life?	7 (5,4)	4 (3,1)	12 (9,3)	41 (31,8)	65 (50,4)
Q23. To what extent do you have opportunities to love?	3 (2,3)	-	9 (7,0)	50 (38,8)	67 (51,9)
Q24. To what extent do you have opportunities to be loved?	-	3 (2,3)	10 (7,8)	44	72 (55,8)

Table 4: Assessment of the WHOQOL-OLD questionnaire

Source: Author, 2023.

(1). The percentage values out, obtained from the total number of 129 surveyed.

the corresponding means and, on the other hand, not high in the variables: sensory functioning and death and dying (1/3 < SD < 1/2 of the corresponding means).

STATISTICS		
Domains	**Average ± DP**	**Median (P25; P75)**
Sensor functioning	67,93 ± 27,48	75,00 (50,00; 93,75)
Autonomy	72,92 ± 19,03	75,00 (56,25; 87,50)
Past, present and future activities	70,93 ± 18,40	75,00 (62,50; 81,25)
Social participation	68,51 ± 21,27	75,00 (56,25; 87,50)
Death and dying	72,38 ± 25,58	81,25 (56,25; 93,75)
Intimacy	80,18 ± 18,54	81,25 (75,00; 100,00)
WHOQOL-OLD total	72,14 ± 13,16	70,83 (63,54; 83,33)

Table 5: WHOQOL-OLD domain statistics (%)

Source: Author, 2023

Table 6 shows the statistics of the WHOQOL-OLD percentage domains according to each of the variables, age group, sex and comorbidities. In this table it can be seen that the only significant differences occurred between those who did or did not have diabetes mellitus in the autonomy domain, between the sexes in the death and dying domain and between those who did and did not have comorbidities in the intimacy domain. Also, it is observed that the aforementioned situations presented significant differences, such as: the mean and median of autonomy were correspondingly higher among those who did not have than those who had diabetes (means equal to 74.69 and 66.52 and medians 75.00 and 68.75); the mean and median of the death and dying domain were higher among male respondents than female respondents (means equal to 79.77 and 69.30 and medians equal to 87.50 and 75.00); the mean and median of the intimacy domain were higher among those with or without comorbidities (means equal to 86.15 and 77.79 and medians equal to 93.75 and 75.00).

In Table 7, no significant differences (p > 0.05) were recorded between the categories of variables analyzed for the total WHOQOL-OLD results.

WHOQOL-OLD total	
Variable	Average ± DP Median (P25; P75)
Age:	
60 to 69	72,46 ± 12,80
	70,83 (63,54; 83,33)
70 to 79	72,65 ± 14,88
	71,87 (61,46; 84,37)
80 to 90	67,21 ± 9,62
	67,19 (63,02; 76,30)
Value of p	**p(1) = 0,543**
Sex:	
Male	74,34 ± 12,71
	72,92 (64,32; 85,68)
Female	71,22 ± 13,31
	70,83 (62,50; 80,21)
Value of p	**p(2) = 0,296**
Occurrence of comorbidities:	
Yes	71,12 ± 13,01
	70,83 (62,50; 82,03)
No	74,69 ± 13,36
	75,00 (65,63; 86,46)
Value of p	**p(1) = 0,164**
HAS:	
Yes	71,76 ± 13,34
	70,83 (62,76; 83,33)
No	72,77 ± 12,98
	71,88 (63,54; 83,85)
Value of p	**p(1) = 0,674**
DM:	
Yes	69,05 ± 11,24
	69,79 (61,98; 72,92)
No	73,00 ± 13,57
	71,88 (63,54; 84,38)
Value of p	**p(1) = 0,161**

Table 7 – Total WHOQOL-OLD statistics according to age group, sex and comorbidities

(1) F test (ANOVA)

(2) Mann-Whitney test.

Source: Author, 2023.

Variable	Sensor functioning	Autonomy	Past, present and future activities
	Average ± DP	Average ± DP	Average ± DP
	Median (P25; P75)	Median (P25; P75)	Median (P25; P75)
age range (years)			
60 to 69	68,90 ± 26,12	74,03 ± 17,93	70,54 ± 19,15
	75,00 (50,00; 93,75)	75,00 (57,81; 87,50)	75,00 (56,25; 81,25)
70 to 90	67,86 ± 28,60	72,14 ± 20,58	72,50 ± 18,50
	68,75 (50,00; 93,75)	75,00 (56,25; 93,75)	75,00 (62,50; 87,50)
80 to 90	60,00 ± 35,75	66,25 ± 22,86	68,75 ± 9,77
	65,63 (26,56; 93,75)	78,13 (53,13; 81,25)	68,75 (62,50; 76,56)
Value of p	**p[1] = 0,722**	**p[1] = 0,669**	**p[1] = 0,723**
Sex:			
Male	71,71 ± 19,96	69,74 ± 27,09	75,33 ± 19,16
	75,00 (50,00; 93,75)	81,25 (62,50; 87,50)	75,00 (60,94; 87,50)
Female	67,17±27,76	71,91±18,99	70,60 ± 17,81
	75,00 (50,00; 93,75)	75,00 (56,25; 87,50)	75,00 (62,50; 81,25)
Value of p	**p[2] = 0,652**	**p[2] = 0,284**	**p[2] = 0,780**
Occurrence of comorbidities:			
Yes	67,26±28,23	71,47±19,88	70,65± 18,46
	75,00 (50,00; 93,75)	75,00 (56,25; 87,50)	75,00 (62,50; 81,25)
No	69,59±25,82	76,52±16,43	71,62± 18,49
	75,00 (50,00;93,75)	75,00 (65,63;87,50)	75,00 (56,25;84,38)
Value of p	**p[2] = 0,846**	**p[2] = 0,231**	**p[2] = 0,951**
HAS:			
Yes	67,27±27,92	71,80±20,74	71,72± 18,39
	75,00 (50,00;93,75)	75,00 (56,25;92,19)	75,00 (62,50;81,25)
No	69,01±27,00	74,74±15,88	69,64± 18,53
	75,00 (50,00;93,75)	75,00 (62,50;87,50)	68,75 (56,25;81,25)
Value of p	**p[2] = 0,824**	**p[2] = 0,590**	**p[2] = 0,456**
DM:			
Value of p	**p(2) = 0,824**	**p(2) = 0,590**	**p(2) = 0,456**
Yes	62,95±30,19	66,52±17,70	69,87± 18,40
	62,50 (37,50;93,75)	68,75 (51,56;81,25)	75,00 (57,81; 79,69)
No	69,31 ± 26,68	74,69 ± 19,09	71,23 ± 18,48
	75,00 (50,00; 93,75)	75,00 (62,50; 87,50)	75,00 (62,50; 81,25)
Value of p	**p[2] = 0,384**	**p[2] = 0,033***	**p[2] = 0,874**

Table 6: Statistics of the WHOQOL-OLD percentage domains according to age group, sex and comorbidities

(*) Significant difference at the 5.0% level

(1) Kruskal-Wallis Test

(2) Mann-Whitney Test

FINAL CONSIDERATIONS

Sleep and quality of life make up an essential binomial for health, and can directly or indirectly interfere with an individual's well-being. The form perceived as ideal and experienced by the elderly involves subjective parameters, typical of each person's reality, however it needs to be understood by both family members and health professionals, as a public health problem.

This study revealed that males and elderly people who practice physical activities reported better quality of sleep, regardless of waking up during the night. With regard to quality of life, it was noticeable that the feeling of happiness and well-being was mentioned, within each reality, and considering that all interviewees are users of Primary Health Care, it is believed that they are people who are under constant monitoring by the multidisciplinary team, even due to possible comorbidities, such as Hypertension and Diabetes, with more expressive numbers in this study.

Concomitant to the above and as a product of this study, the activities will continue, through the dissemination of the topic through participation in events in the national territory of a scientific nature, with the publication of an article and sharing of results with the Primary Health Care of the municipality, aiming to qualitatively and quantitatively increase the scientific performance of Jaboatão dos Guararapes, as well as developing a schedule of health education activities with the assistant team.

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APPENDIX A

Name		
Age	Sex/ gender	Marital status
Profession		
Education ( ) Without education ( ) Literate ( ) Elementary School ( ) High school ( ) University education		
Do you use medicine? Yes, which No		
Commorbities ( ) H.A.S. ( ) Diabetes ( ) Neurological, which? ( ) Vascular, which? ( ) Cardiac, which?		
Regarding the quality of your sleep, do you notice that:		
A) You sleep well all night		
B) You sleep well, but you wake up during the night		
C) You don't sleep well		
D) You take a long time to fall asleep		
Do you experience daytime drowsiness?		
A) yes		
B) No		
Do you consider that you wake up:		
A) Willing		
B) Unwell		
How long have you noticed irregular sleep?		
A) Less than 1 year		
B) More than 1 year		
Do you practice any type of physical activity?		
A) Yes, what time? How many times a week?		
B) No		

QUESTIONNAIRE ON THE ASSOCIATION BETWEEN SLEEP AND QUALITY OF LIFE IN THE ELDERLY POPULATION CARE FOR PRIMARY CARE IN JABOATÃO DOS GUARARAPES

Soure: Author, 2023

APPENDIX B

Municipal health department
Superintendence of management of the Unified Health System
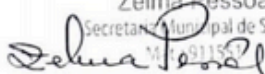Health Education Coordination

Consent: 52/2022

Jaboatão dos Guararapes, December 12, 2022.

CONSENT LETTER

I authorize the responsible researcher: Rita de Cassia Hoffman Leao and Jessica Rezende Dario da Silva's team to carry out the research project entitled: ASSOCIATION BETWEEN SLEEP AND QUALITY OF LIFE IN THE ELDERLY POPULATION SERVED IN PRIMARY CARE IN JABOATAO DOS GUARARAPES, under technical advice by Jullye Mary, planning and project manager (GPEP) at the Jaboatão dos Guararapes health department.

This authorization is conditioned on researchers complying with the requirements of resolution 466/12 of the national health council (CNS) and its supplements, committing themselves to using research data exclusively for scientific purposes. Therefore, they must maintain confidentiality and ensure that there will be no harm to people and/or communities, nor will there be any expense to the municipality resulting from the research.

Before starting data collection, the researcher must present the duly approved substantiated opinion, issued by the research ethics committee, involving human beings, accredited to the CEP/CONEP system and in case of non-compliance with the above items, there will be freedom to remove this consent at any time during the research.

Zelma Pessôa
Secretaria Municipal de Saúde

Zelma de Fátima Chaves Pessôa
Secretary of department of Municipal Health

AV. Barreto de Menezes, S/N – Prazeres 54.330-900 – Jaboatão dos Guararapes – PE
Fone: 3476-9904 – Fax: 3476-9904 CNPJ: 03.904.39500001-45

14

WHOQOL-OLD QUESTIONNAIRE

Please keep in mind your values, hopes, pleasures and concerns.

We ask you to think about your life in the last 2 weeks.

The following questions ask how much you have had certain feelings in the last 2 weeks.

1- To what extent do the losses in your senses (for example: hearing, vision, taste, smell) affect your daily life?

(1) Nothing (2) Very little (3) More or less. (4) Quite a bit (5) Extremely

2 – To what extent does the loss of, for example, hearing, vision, taste, smell, touch, affect your ability to participate in activities?

(1) Nothing (2) Very little (3) More or less. (4) Quite a bit (5) Extremely

3 – How much freedom do you have to make your own decisions?

(1) Nothing (2) Very little (3) More or less. (4) Quite a bit (5) Extremely

4 – To what extent do you feel that you control your future?

(1) Nothing (2) Very little (3) More or less. (4) Quite a bit (5) Extremely

5 – How much do you feel the people around you respect freedom?

(1) Nothing (2) Very little (3) More or less. (4) Quite a bit (5) Extremely

6 – How worried are you about the way you will die?

(1) Nothing (2) Very little (3) More or less. (4) Quite a bit (5) Extremely

7 – How afraid are you of not being able to control your death?

(1) Nothing (2) Very little (3) More or less. (4) Quite a bit (5) Extremely

8 – How afraid are you of dying?

(1) Nothing (2) Very little (3) More or less. (4) Quite a bit (5) Extremely

9 – How much do you fear suffering pain before dying?

(1) Nothing (2) Very little (3) More or less. (4) Quite a bit (5) Extremely

10 – To what extent does the functioning of your senses (for example: hearing, vision, taste, smell, touch) affect your ability to interact with other people?

(1) Nothing (2) Very little (3) More or less. (4) Quite a bit (5) Extremely

11 – To what extent can you do the things you would like to do?

(1) Nothing (2) Very little (3) More or less. (4) Quite a bit (5) Extremely

12 – To what extent are you satisfied with the opportunities to continue achieving other goals in your life?
(1) Nothing (2) Very little (3) More or less. (4) Quite a bit (5) Extremely

13 – How much do you feel you have received the recognition you deserve in your life?

(1) Nothing (2) Very little (3) More or less. (4) Quite a bit (5) Extremely

14 – To what extent do you feel you have enough to do each day?
(1) Nothing (2) Very little (3) More or less. (4) Quite a bit (5) Extremely

15 - How satisfied are you with what you have achieved in your life?
(1) Very dissatisfied (2) Dissatisfied (3) Neither satisfied nor dissatisfied (4) Satisfied (5) Very satisfied

16 - How satisfied are you with the way you use your time?
(1) Very dissatisfied (2) Dissatisfied (3) Neither satisfied nor dissatisfied (4) Satisfied (5) Very satisfied

17 – How satisfied are you with your level of activity?
(1) Very dissatisfied (2) Dissatisfied (3) Neither satisfied nor dissatisfied (4) Satisfied (5) Very satisfied

18 – How satisfied are you with the opportunities you have to participate in activities?
(1) Very dissatisfied (2) Dissatisfied (3) Neither satisfied nor dissatisfied (4) Satisfied. (5) Very satisfied

19 – How happy are you with the things you can expect from now on?
(1) Very unhappy (2) unhappy (3) neither happy nor unhappy (4) happy (5) very happy

20 – How would you evaluate the functioning of your senses (for example: hearing, vision, taste, smell, touch)?
(1) Very bad (2) Bad (3) Neither bad nor good (4) Good (5) Very good

21 – To what extent do you have a feeling of companionship in your life?
(1) Nothing (2) Very little (3) More or less. (4) Quite a bit (5) Extremely

22 – To what extent do you feel love in your life?
(1) Nothing (2) Very little (3) More or less. (4) Quite a bit (5) Extremely

23 – To what extent do you have opportunities to love?
Nothing (2) Very little (3) More or less. (4) Quite a bit (5) Extremely

24 – To what extent do you have opportunities to be loved?
Nothing (2) Very little (3) More or less. (4) Quite a bit (5) Extremely