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THE SLEEP OF THE ELDERLY IN A DAY CARE

O SONO DOS IDOSOS EM CENTRO DE DIA

EL DORMIR DE LOS ANCIANOS EN UN CENTRO DE DÍA

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ABSTRACT

Introduction: Changes in sleep quality are highly relevant for the elderly, because, in addition to being frequent, they affect the performance of their activities of daily living and consequently their health.

The objective was to evaluate the sleep habits in the elderly of a day care center in the city of Évora.

Methods: A descriptive study was conducted; the object of this study was the elderly population who attend a day care center in the city of Évora. For data collection, we used the Questionnaire on Sleep in Old Age by Marques and Espírito-Santo (2011), from Instituto Superior Miguel Torga, answered by 30 seniors.

Results: There were some changes, such as 36.7% of the elderly reported taking more than 60 minutes to fall asleep, on the other hand, 63.3% wake up 2 to 3 times a night. Also, 56.7% report that the level of depth their sleep is light, and 60% report tiredness or day-time sleepiness.

Conclusion: It is concluded that it is necessary to demystify the preconceived idea that aging is associated to worsening sleep quality. There is a need to assess the risk to elderly is health the lack of effective sleep, so that community intervention strategies are established related to contribute to minimize this problem.

Descriptors: Aging; Community Health Nursing; Sleep; Sleep Hygiene.

RESUMO

Introdução: As alterações na qualidade do sono assumem elevada relevância para os idosos, pois, além de serem frequentes, afetam a execução das suas atividades de vida diária e consequentemente a sua saúde.

O objetivo foi avaliar o sono e os fatores de interferência do mesmo nos idosos de um centro de dia do concelho de Évora.

Métodos: Foi realizado um estudo descritivo, cuja população foram os idosos que frequentam um centro de dia do concelho de Évora. Na recolha de dados utilizou-se o questionário sobre o Sono na Terceira Idade de Marques e Espírito-Santo (2011), do Instituto Superior Miguel Torga, respondido por 30 idosos.

Resultados: Verificou-se algumas alterações, tais como 36,7% dos idosos referiram demorar mais de 60 minutos a adormecer, por outro lado 63,3% acordam 2 a 3 vezes por noite. Também 56,7% referem que o nível de profundidade o seu sono é leve e 60% referem cansaço ou sonolência diurna.

Conclusão: Conclui-se que é necessário desmistificar a ideia pré-concebida, de que é normal à medida que se envelhece, dormir-se cada vez com mais dificuldade. Impera a necessidade de avaliar que risco acarreta para a saúde do idoso a falta de um sono eficaz, de modo a serem estabelecidas estratégias de intervenção comunitária, que contribuam para a minimização desta problemática.

Palavras-chave: Enfermagem em Saúde Comunitária; Envelhecimento; Higiene de Sono; Sono.

RESUMEN

Introducción: Los cambios en la calidad del sueño son de gran relevancia para los ancianos, ya que además de ser frecuentes, afectan el desempeño de sus actividades diarias y, en consecuencia, su salud.

Objetivos fueron evaluar los hábitos de sueño en los ancianos de un centro de día en el municipio de Évora.

Métodos: Se ha realizado un estudio descriptivo, cuya población fueron los ancianos que asisten a un centro de día en el municipio de Évora. Para la recopilación de los datos, se utilizó el Cuestionario sobre el sueño en la vejez de Marques y Espírito Santo (2011), del Instituto Superior Miguel Torga, respondido por 30 personas mayores.

Resultados: Hubo algunos cambios, como que el 36,7% de los ancianos informó tardar más de 60 minutos en conciliar el sueño, por otro lado, el 63,3% se despierta de 2 a 3 veces por noche. Además, el 56,7% informa que el nivel de profundidad de su sueño es ligero y el 60% informa cansancio o somnolencia diurna.

Conclusión: Se concluye que es necesario desmitificar la idea preconcebida, que es normal a medida que uno envejece, dormir, con dificultad creciente. Existe la necesidad de evaluar el riesgo para la salud de los ancianos de la falta de sueño efectivo, de modo que se establezcan estrategias de intervención comunitaria que contribuyan a la minimización de este problema.

Descriptores: Enfermería en Salud Comunitaria; Envejecimiento; Higiene del Sueño; Sueño.

INTRODUCTION

Over the last century, the world's population has seen considerable demographic changes, especially in the most developed countries. The average life expectancy has increased exponentially in recent decades and this propensity seems to be to continue⁽¹⁾.

The phenomenon of ageing is transversal to all countries, regardless of their economic conditions. In some countries, aging can be considered a victory, especially if the concept is presented in an active way, thus resulting in an increase in physical, psychological and social well-being, which has repercussions on improving the health of the elderly⁽²⁾.

Aging should be seen as an opportunity for people to live independently and healthily for as long as possible until the end of their life. For this to happen, there must be accountability of the person and society to promote actions necessary to integrate a perspective of renewal in behaviors⁽³⁾.

Promoting healthy lifestyles leads to an increase in quality of life and validates an individual commitment of each person with their own choices and behaviors. It is not only in old age that this type of conduct should be had, however, if these are not adopted in advance, they should be adopted at this stage of the life cycle if there is this choice on the part of the elderly⁽³⁾.

Today, there is a change in lifestyles that inevitably leads to changes in sleep habits, also a consequence of technological as well as industrial and labor development. Thus, sleep has become an obstacle to work, productivity and economic interests, being increasingly devalued, but a quality night's sleep is an essential condition for the well-being of individuals⁽⁴⁾.

The importance of sleep is expressed in Maslow's Theory of Needs, in which man's needs are ordered by levels, or in a hierarchy of value. At the lowest level, but of great importance, are the physiological needs, at the level of which sleep fits. These needs are considered the most basic and need to be met to keep the body healthy and thus ensure survival. Without these sated needs, the individual cannot even worry about the following levels of the pyramid⁽⁵⁾.

The quality of sleep increases the ability to adapt to adverse circumstances, with for example stress. Sleep is fundamental and influences several functions, including those associated with homeostasis⁽⁴⁾. Individuals are more vulnerable if there is a lack of sleep hours, which are also associated with increased chronic diseases⁽⁶⁾. Chronic sleep deprivation manifests in excessive daytime sleepiness, decreased performance of daily activities and decreased quality of life due to cardiovascular and metabolic changes⁽⁷⁾.

In humans, sleep duration decreases with age, which is considered a natural process⁽⁴⁾. In the elderly, sleep undergoes some structural changes, highlighting, among them, the overall decrease in nighttime sleep. Older people need more hours lying in bed to get the same number of hours of sleep they had before old age.

There is also an increase in the latency period, that is, the ability to start sleep decreases with age, with a tendency to a more superficial, shorter sleep, besides being a more fragmented sleep. The older people are even more susceptible to awakening due to the increase in environmental stimuli⁽⁸⁾.

The circadian rhythm of sleep-wakens degenerates over the years, making these rhythms less precise, with a decrease in their amplitude, which will contribute to less consistent sleep-wake periods.

Melatonin secretion at night also decreases with age, and there is also a reduction in the threshold of awakening especially in the most superficial phases of NREM sleep, which leads to a decrease in the threshold of awakening due mainly to factors such as luminosity and noise⁽⁸⁾.

Sleep disorders are frequent in the elderly population, sleep deprivation influences the physical and mental well-being of the elderly, which leads to severe functional damage to play social roles and interpersonal relationships⁽⁹⁾.

Thus, the aim of this study is to evaluate the sleep of the elderly in the context of day center, as well as the factors of interference in it.

METHODS

A non-experimental descriptive study was conducted. Of the total of 40 elderly who attend a day center in the municipality of Évora, only 30 met the inclusion criteria of the study: age equal to or over 65, cognitive abilities to answer the questionnaire, voluntary participation and completion of free, informed and informed consent.

Data collection took place in 2019 through the application of a three-part questionnaire. In the first, there are eight questions that allow the characterization of the population regarding gender, age, marital status, professional status, schooling, whether the dwelling is located next to places with nocturnal movement, if there is some situation in the place of residence that disturbs sleep and if there is a momentary cause of sleep alteration.

In the second part there are nine questions related to lifestyle habits that can influence sleep, such as alcohol consumption, tobacco, caffeine intake, hygiene and entertainment habits, eating habits, whether there is satisfaction with the number of hours sleeping per night. In this part there is also a table regarding the sleep times in which the usual bedtime and uptime is questioned and the number of hours of sleep per night.

The third part is composed of the Questionnaire on Sleep in the Third Age - QSTA, Marques and Espírito-Santo (2011), of the Higher Education Institute Miguel Torga.

In the first part of this questionnaire, there are seven questions that address, among other subjects, sleep latency, nocturnal awakenings, quality and depth of sleep. The sum of these responses allows obtaining the Subjective Sleep Quality Index (SSQI) that can vary between 0 (best) and 28 (worse).

The second part of the QSTA consists of 12 answer questions (Yes/No), among which arise daytime sleepiness, the presence of pain that affects sleep, the practice of physical activity as well as whether there are sleep disorders with a list of common diseases if so, whether there is a dosing of disturbing sleep and wakefulness medications with their listings.

The data obtained were organized and analyzed, using descriptive statistics and using IBM SPSS software version 24.0 (Statistical Package for Social Science).

All ethical procedures were complied with, according to the Helsinki Declaration of Ethics in Research Involving Human Beings, obtaining positive Opinion SC/2019/3424 from the Ethics Committee of the Polytechnic Institute of Portalegre.

RESULTS

Sociodemographic characterization

The questionnaire was answered by 30 elderly people, of whom 33.3% were male and 66.7% were female. Regarding age, there is an average age of 83.27, with the minimum age being 67 and the maximum age 92. Regarding education, it is observed that most respondents (66.7%) have the 1st cycle of schooling, 23.3% cannot read or write and 10% can read and write, but without having completed any level of education. Regarding marital status, most of the population is composed of widowed elderly (Table 1^ª).

Life habits that influence sleep

Regarding alcohol consumption, the majority (76.7%) not having this type of habit and 23.3% reported its consumption. Among the individuals with ethylic habits, 42.9% consume every day, 28.6% only once a week and 28.6% exclusively at weekends.

Regarding the consumption of caffeine-containing beverages, 63.3% deny their intake, with 36.7% of them consuming them. Regarding hygiene habits at night, 73.3% of the elderly reported that they do not have this habit, and this is only in 26.7% of the elderly. Regarding watching television before falling asleep, 86.7% have this habit and 13.3% deny it and respondents who report this habit, 65.4% reported doing so in the room and 34.6% in the room.

Regarding eating habits before going to sleep, 60% reported not eating any type of food, and 40% have a habit of eating. Of the respondents, 93.3% usually sleep alone and the remaining 6.7% sleep alone.

Questionnaire on Sleep in the Third Age

Regarding latency to fall asleep, 36.7% reported that it takes more than 60 minutes to fall asleep, 20% takes between 15 to 30 minutes, 16.7% between 46 and 60 minutes and 13.3% takes between 1 and 14 minutes and with an equal percentage takes between 31 and 45 minutes. Regarding difficulties in falling asleep after bedtime, 40% report that it has sometimes, 36.7% never have, 13.3% rarely have, 6.7% have almost all or every night and 3.3% have between 3 to 4 times a night.

Regarding waking up at night, 63.3% wake up 2 to 3 times a night, 13.3% once a night, 10% wake up 4 to 5 times a night, 10% do not wake up and 3.3% wake up 6 or more times a night (Fig. 1^o).

About waking spontaneously before the desired time, 40% of respondents reported sometimes, 20% almost all or every night, 16.7% rarely, 13.3% never wake up and 10% report 3 to 4 times a week.

Regarding sleep quality, 60% report that this is reasonable, 20% that is good, and 10% respond that it is bad and in equal percentage respond bad.

Regarding the depth of sleep, 56.7% reported that sleep is light, 20% that is heavy, 10% that is light and in equal percentages of 6.7% we have what they say is heavy and very heavy.

Regarding the sleep of the sample in the last month, some alterations were found (Table 2^o).

Regarding the duration of these naps range from 10 minutes to 14.3%, 20 minutes to 7.1%, 30 minutes to 21.4%, 1 hour to 28.6% and 2 hours to 28.6%.

Analyzing drowsiness and tiredness during the day, 60% of the elderly feel tired or sleepy while 40% deny this condition (Fig. 2^a).

Taking diuretic medication can also influence sleep, due to the need to urinate at night, and it is verified that of the 80% of elderly who woke up many times during the night 26.7% take diuretics. Of the 33.3% of the elderly who had difficulty falling asleep, 26.7% reported frequent pain caused by physical reasons or illness. When relating the practice of physical activity with pain relief, it was verified that in the 50% of elderly who reported frequent pain, namely 33.3% did not practice daily physical activity in the last month. On the contrary, of the 50% who did not report pain, 36.7% who practiced daily physical activity in the last month. In the 86.7% of the elderly who watch television before falling asleep, 30% reported taking more than 60 minutes to fall asleep. Regarding eating habits before going to sleep, it is observed that 60% of the elderly do not eat any food and of these 26.7% report taking about 60 minutes or more to fall asleep. Instead of 40% feeding before going to sleep, only 10% of these take 60 minutes or more to fall asleep. When relating the time, it takes to fall asleep with the practice of nap during the day, of the 43.3% of the elderly who sleep daytime, it is observed that 20% takes more than 60 minutes to fall asleep instead of the 56.7% of the elderly who do not have the habit of daily nap, in which 16.7% takes the same time to fall asleep. About drowsiness and tiredness during the day related to the depth of sleep, it is possible to conclude that of the 60% of the elderly who report feeling sleepy and tired during the day, they report 30% that their sleep is mild and 10% light.

The Subjective Sleep Quality Index (SSQI) of this sample is in the mean value of 13.13.

DISCUSSION

Aging inevitably arises associated with changes in sleep quality. The literature indicates that sleep becomes fragmented, with greater superficiality, and is therefore less efficient and worse quality as we age.

Regarding the lifestyle habits that influence sleep, it is verified that the elderly do not adopt sleep hygiene measures, watch television before falling asleep, do not eat any food after dinner and report alcohol consumption. Studies show that the adoption of sleep hygiene measures should be adopted by the elderly when the elderly report complaints at

this level, because it is proven that these can bring improvement in sleep quality⁽¹⁰⁾. Among these measures, we highlight the control of diet, reduction of the use of stimulants such as alcohol, in addition to the control of environmental factors, such as ambient noise, light and temperature that can disturb sleep. In addition, it is advisable to avoid intense dinners, but to avoid going to bed hungry⁽¹⁰⁾.

Regarding sleep latency, this translates into poor quality sleep, since the elderly take more than 60 minutes to fall asleep, which will converge with a study that reveals that on average the elderly took 64 minutes to fall asleep⁽¹¹⁾. Nocturnal awakenings are mostly reported, in a proportion of 2 to 3 times a night, and in the study mentioned above, it is concluded by the same result⁽¹¹⁾. Awakening before the planned time is a problem that affects respondents, as other researchers have concluded⁽¹²⁾.

Sleep quality was reported by most of the elderly as reasonable, and its depth was mostly mild, referring to respondents being satisfied with their sleep. There seems to be a nonsense, since a light sleep is not a restorative sleep, which leads to the elderly not being able to consider this sleep satisfactory, capable of suppressing their needs.

However, similar conclusions were reported by another investigator, in which the elderly presented an indicative score of poor sleep quality, however most reported satisfaction with their sleep quality. It may then be questioned whether an elderly person has become accustomed to a sleep that is not satisfactory and that he considers as normal due to aging⁽¹²⁾.

The Subjective Sleep Quality Index (SSQI) of this sample is 13.13, which can be concluded as an intermediate result, considering that it can vary between 0 and 28, thus inferring that the sleep quality of this sample is considered reasonable, a result that comes to converge with the conclusions mentioned above.

Drowsiness and tiredness during the day are coincident with other studies, in which poor quality of night sleep is associated with the presence of symptoms of excessive daytime sleepiness, which is usually related to external factors such as routines imposed by the institution and which are considered inflexible, as well as inactivity^(12,13).

Pain is one of the factors that affects sleep, being reported by most respondents, and is also reported in the conclusion of another study, since it assumes great importance, as it still affects the daily life and consequently the health of the elderly. Pain intensity as well as age negatively affect the sleep of the elderly and the older the elderly, together with the presence of pain, the worse the sleep quality scores observed in this study⁽¹⁴⁾.

Regarding nap, about half of the elderly report taking long nap, similar conclusions were reported by another investigator, and the literature notes that short nap can be beneficial or impair sleep at night, rather than long nap snags that are associated with longer latency periods as well as frequent nocturnal awakenings⁽¹²⁾.

The taking of diuretic medication may be associated with decreased total time and sleep efficiency, such as increased nocturnal awakenings, of the elderly who reported waking up often during the night, there is a significant fraction that takes diuretics. Studies reveal that the need for the elderly to get up at night is related to complaints of nocturia⁽¹²⁾. Nocturia can have consequences for the elderly, leaving them more susceptible to suffering a fall. In one study, the high prevalence of nocturia and a decrease were observed, especially in men over 80 years of age⁽¹⁵⁾. Another study concluded that falls increased as the frequency of nocturia increased⁽¹⁶⁾.

After analyzing the data obtained, there is a need to reflect on the limitations of the present study, highlighting, first, the difficulty in obtaining a more significant sample, and at the level of the institutions it becomes difficult to obtain authorizations for the application of the data collection instrument, which in turn does not allow the sample to be more representative of the population and thus be able to obtain a greater external validity of the study.

The lack of previous research on the problem addressed in this study represents an increased difficulty in carrying it out, but at the same time constitutes an opportunity for new investigations to emerge in the context of this problem when identifying this gap. The period in which the present study took place may also emerge as a limitation, as it has developed in a limited period.

CONCLUSION

The evaluation of the sleep of the elderly in the day center, as well as the factors of interference in the same, allowed to identify some problems patent in this population, emerging among them, the life habits that negatively influence sleep (watching television before falling asleep, food deficit, sedentary lifestyle), the risk of domestic accidents (falls), due to the nocturnal awakenings that we infer to be related to diuretic medication and pain complaints that disturb sleep.

Changes in sleep are an evident problem and increasingly expressed by individuals in this age group in general. It is necessary to demystify the preconceived idea, that it is normal as you get older, to sleep, more and more difficultly.

The nurse as a health professional, with privileged contact with the population, should be awake to the possible changes in sleep that may arise in the elderly, performing a comprehensive and detailed assessment of their sleep and define together with the other multidisciplinary team, as well as with the elderly and their families, personalized and centered care in the elderly and also strategies aimed at promoting sleep-favoring lifestyle habits, thus preventing profound disorders that consequently lead to increased demand for sleep-inducing medication.

Nurses should seek to boost and disseminate to the elderly as well as all the institutions that welcome them, what is the importance of sleep, as well as the effects of poor sleep quality on the health of the elderly. Thus, the need to assess what risk causes the health of the elderly to lack effective sleep, to develop community intervention strategies that contribute to the minimization of this problem.

In the society in which we live, there is an urgent need to carry out awareness campaigns for the entire population, but especially for the elderly population, so that they can recognize signs and seek health services, in case they identify possible sleep disorders, on the other hand it is observed that some investment should be made for health professionals on the theme of sleep.

The results of this research demonstrate the importance that the study of sleep should have, for all nurses and other professionals of the health teams. It is necessary that these professionals promote the importance of sleep among the elderly and the rest of the population, since sleep is necessary for the survival of the human being and aims at restoring vital functions, which influence the physical and psychic well-being of the elderly.

Authors Contributorship

MF: Study design, data collection, storage, data analysis, review and discussion of results.

AN: Coordination, review and discussion of results.

All authors read and agreed with the published version of the manuscript.

Ethical Disclosures

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Confidentiality of Data: The authors declare that they have followed the protocols of their work center on the publication of data from patients.

Protection of Human and Animal Subjects: The authors declare that the procedures were followed according to the regulations established by the Clinical Research and Ethics Committee and to the 2013 Helsinki Declaration of the World Medical Association.

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Table 1 - Distribution according to the characterization of the elderly who attend the day center 2019.[^]

Variables		n	%
Sex	Male	10	33,3
	Female	20	66,7
	Total	30	100,0
Age	65-70	1	3,3
	71-76	2	6,7
	77-82	11	36,7
	83-88	12	40,0
	89-94	4	13,3
	Total	30	100,0
Schooling	Can't read or write	7	23,3
	Can read and write	3	10,0
	1 st Cycle	20	66,7
	Total	30	100,0
Marital Status	Widower/Widow	23	76,7
	Divorced	1	3,3
	Married	4	13,3
	Single	2	6,7
	Total	30	100,0
Profession	Retired	30	100,0
	Total	30	100,0

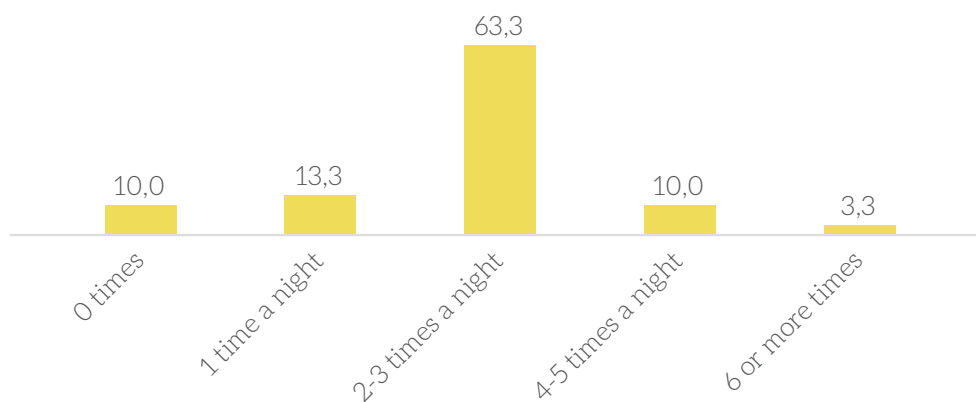
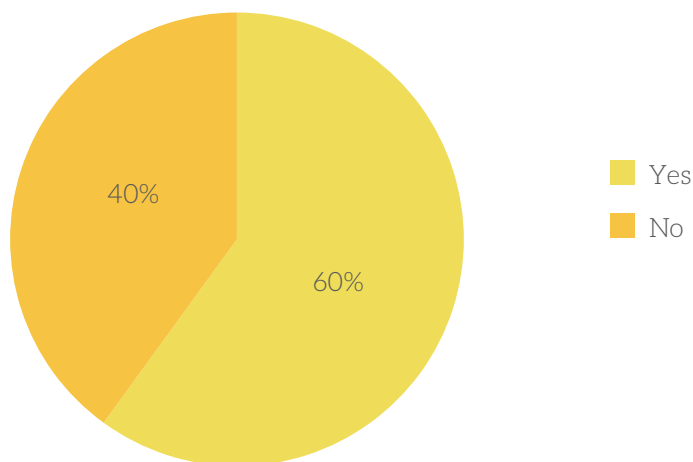
Figure 1 - Number of times you wake up at night.[^]

Table 2 – Characterization of sleep in the last month and interference factors in the same.^κ

	Yes (%)	No (%)
Wake up often at night.	80	20
Wake up too early and never fall asleep again.	60	40
Influence of sleep quality on daily activities and mood.	66,7	33,3
Satisfaction with sleep.	73,3	26,7
Take medication to fall asleep.	30	70
Daily physical activity of at least 30 minutes.	53,3	46,7
Regular sleep schedule/pattern maintenance.	86,7	13,3
Pain complaints that disturb sleep.	50	50
Taking naps during the day.	43,3	56,7
Diagnosed sleep diseases	0	100

Figure 2 – Characterization of sleep in the last month and interference factors in the same.^κ