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THE DISTURBANCE OF SLEEP DISORDERS IN NURSING PROFESSIONALS

Ana Paula Conceição de Souza - Nurse Graduate Alfredo Pinto Nursing School. Federal Rio de Janeiro State University (UNIRIO, Member of the Research Laboratory: Nursing, Technology, Health and Work (PENSAT)/Br

Joanir Pereira Passos - PhD in Nursing, Associate Professor, Department of Public Health Nursing, Alfredo Pinto Nursing School. Federal Rio de Janeiro State University (UNIRIO). Professor of Postgraduate Program in Nursing (PPGENF). Leader of the Research Laboratory: Nursing, Technology, Health and Work (PENSAT)/Br

ABSTRACT

Objectives: To map and discuss scientific articles relating to grievances of sleep disturbance among nursing. **Methods:** A descriptive analytical type bibliometric databases held in the VHL. **Results:** In the 13-year period were conducted 13 studies, most used the quantitative method, the apex of the papers in 2009, in public institutions, and the Journal of School Nursing - USP with the largest number of published articles, various instruments were used to approach the subject. **Conclusion:** Disorders of insomnia and excessive daytime sleepiness cause diseases that affect worker health nursing, emphasizes the need for actions and practices that improve the quality of life of nursing and mitigate the grievances of sleep disorders in these professional.

Descriptors: Nursing; occupational health; sleep.

INTRODUCTION

Sleep deprivation has great influence on brain function and organic, for being in this period that the brain restores the conditions in the preceding period of wakefulness, being responsible for the revival of energy metabolic balance and the physical and mental development, and that its absence causes in various metabolic abnormalities, endocrine, cognitive, physical and neural changes in the normal pattern of sleep, which together end up compromising the health and quality of life of the subject (Ackel, 2005; Martino, 2009).

So, sleep deprivation caused by night work leads to mental and physical fatigue, apathy, neglect, hardening of individual attitudes and the lack of sleep causes irritability, lack of concentration and memory (Martino, 2002).

Sleep is as important as physical exercise or eat healthily. Sleep takes up about a third of human life, which is important for the strengthening of memory, regular hormonal balance and improve engine performance. However, there is still a widespread trend to reduce the amount and quality of sleep, which, in the long run, can cause serious damage to health (Godoy, Bandeira, Xavier & Gusmão, 2012).

Before it can be considered that the poor sleep pattern can result in problems of physical and cognitive impairment in workers' health, which may affect the exercise of their activity.

In a study by Canadian and French researchers observed that sleep disorders and chronic fatigue were the main problems directly related to work in shifts of daily 12:00 in a Canadian refinery (Moreno, Fischer & Rotenberg, 2003).

The oldest professional groups who work on shift systems are health services, among which stand out the nursing professionals: nurses, nursing and nursing assistants. As the activities of nursing in hospitals are uninterrupted, professionals are organized into shifts (Fischer, Teixeira, Borges, Gonçalves & Ferreira, 2002).

In the case of nursing professionals, the night work reverses the sleep-wake cycle, sleep during the day and work at night, inducing a synchronization of the biological rhythms. The disorder of the structure of circadian rhythms cause malaise, fatigue, sleepiness, insomnia, irritability, loss of mental agility and performance and, consequently, decreased efficiency. Daytime sleep is affected by unfavorable environmental conditions such as lighting, noise and domestic events, modifying the distribution of sleep stages and interfering with its restorative property (Maynardes, Sarquis & Kirchhof, 2009).

In Brazil, some studies were carried out in this field. A research that studied nurses from a hospital in Salvador, Bahia. The study showed that, based on the self-assessment of health professionals, when night nurses were compared to those of day shifts, the first showed higher rates of prevalence of symptoms and health problems than the diurnal. The symptoms were associated with night work, such as: changing the quality of sleep, digestive disorders and symptoms of fatigue (Fischer, Teixeira, Borges, Gonçalves & Ferreira, 2002).

We conducted a study among nursing assistants and nurses working in a public hospital of São Paulo. The objective of this study was to evaluate the perception of duration and quality of sleep episodes in days of work and rest, as well as the levels of alertness during the day shifts and night work 12:0. The quality of daytime sleep episodes after the work was perceived as worse than the quality of nighttime sleep episodes. It is indicative that the sleepiness in night work is present and can seriously harm both professional workers of nursing about patients that are in your care (Fischer, Teixeira, Borges, Gonçalves & Ferreira, 2002).

The ratio of disturbance of the sleep-wake cycle with the work can be linked to the condition concerning working conditions and the quantity, quality and poor sleeping time cause headaches, chronic fatigue and gastrointestinal disorders Ministério da Saúde (MS, 2001).

The sleep-wake cycle disorders are defined as a loss of sync between the sleep-wake cycle of the individual and the sleep-wake cycle socially established as normal, resulting in complaints of insomnia, early interruption of sleep or of excessive sleepiness. These disturbances can be of organic origin assumed, depending on the relative contribution of psychological factors, psychosocial or organic. The sleep-wake cycle disorders related to work can be included in this category, since, by definition, are determined by working at night under fixed or by alternating diurnal hours, afternoon and/or night in shifts relay (MS, 2001).

Although there are important national studies, there is still the need to investigate the scientific productions that address the proposed theme, in order to expand the knowledge of the subject to practical and scientific purposes.

On the interest on the topic and the few published studies about it, the reason inciter for the development of the present study, the importance to map, analyze and discuss on the productions published relating to harms of sleep disorder on health professionals, this is based for the purpose of promoting and legitimizing the debates this issue.

Thus, this study intends to contribute in identifying publications that deal with on the topic in order to collaborate with information to the scientific and practical field in the area of workers ' health, with a view to understanding the implications of the harms of sleep disorder in the health-disease process in this category.

However, the development of research relating to nursing and its field, collaborating and stimulating discussion on the subject.

On the above, this study has as object the scientific productions about the harms of sleep disorder. To operationalize the study was set the following goal: Map and discuss scientific articles relating to harms of sleep disorder in nursing professionals.

METHODOLOGY

Analytical descriptive study of Bibliometric type, which consists of a quantitative technique of research that aims to classify and measure the productivity of authors in a given key field (Vanti, 2002).

The bibliometric indices contribute to assess the productivity and quality of scientists' research, by means of the measurement based on the numbers of publications and citations of various researchers (Meis, Maia, Lannes & Machado, 1999)

The bibliometrics as quantitative and statistical technique of measuring indexes of production and dissemination of knowledge scientific as proceeds to identify the population demographics, emerging at the beginning of the century as a symptom of the need for the study and evaluation of the activities of production and scientific communication (Fonseca, 1993).

The capture of the articles was made through the Virtual Health Library (VHL), the databases were used: Latin American Literature and Caribbean Health Sciences (LILACS) and Scientific Electronic Library Online (SciELO), the survey was conducted in June 2013.

And complying with the following criteria: the established descriptors-nursing (NURSE), workers' health (ST) and sleep (S), and an association between the descriptors to capture the largest number of possible articles, articles with relevance and appropriateness to the theme, with timeframe of 2000 to 2013, articles available in full, published in Portuguese and English.

For collection and analysis of data was elaborated an array with the following elements: periodical, year, authors, titration and workplace training, type, method, location, scenery, participants and results. Data analysis was performed by means of simple frequency.

RESULTS AND DISCUSSION

From the brief analysis in the form of array, we obtained elements for the discussion of the data, given that we developed this study, based on an exhaustive reading of the articles found.

The discussion and analysis can be seen by the representations and comments made in the following tables:

Table 1- Databases consulted

Database	Incomplete text	Full text		
		Off-topic	Thesis	Selected articles
LILACS	10	06	05	02
SciELO	--	07	--	07
LILACS/SciELO	--	--	--	04
Total	10	13	05	13

In table 1 are exposed articles found through the databases after the Association of selected descriptors and, following inclusion criteria found 10 items not complete in LILACS, of complete texts found 13 articles outside of the theme in LILACS and SciELO, five articles were doctoral theses, totaling 13 publications selected for this study.

We realize that the 13 articles analyzed there was a diversification of subject-selected research participants, i.e. six articles used the nursing workers, covering all the staff that

make up the nursing professionals, not distinguishing their professional category; five articles have addressed the attendants; two articles have worked with technicians and nursing assistants.

Is valid to note that all surveys conducted on the topic are, among these 11 articles used quantitative method, a qualitative method and a quantitative and qualitative.

Besides the interest of researchers in addressing this issue, because it is a topic relevant to the field of occupational health, promoting the development of strategies to identify situations that result in risk or production of harms to health (MS, 2004).

Table 2 - Year of publication of selected articles

Year of Publication	Number of selected articles
2002	01
2004	01
2007	01
2009	04
2010	01
2011	01
2012	02
2013	02

We realize that the number of productions about theme is reduced, based on our timeframe of 2000 to June 2013. According to table 2 the publications regarding the topic only in 2002. In the period from 2004 to 2007 there were sporadic publications on the subject, i.e. a publication every year cited and from 2009 that more publications by topic.

From 2012 starts an increase of publications on the topic, it can be called that in this same year enters validity Ordinance GM/MS N° 1.823, August 23, 2012 that instituted the Worker’s National Health Policy. Which is aimed at the promotion and protection of the health of workers and the reduction of morbidity and mortality arising from development and models of production processes through the implementation of actions of promotion, surveillance, diagnosis, treatment, recovery and rehabilitation of health (MS, 2004).

We emphasize that the national policy on occupational health awakens the interest in knowing and disseminating on the needs of the worker’s health, and that the increase

for the publications health of nursing professionals can mean positively in the improvement in daily life by promoting occupational quality and improvements in the health of these professionals.

Table 3 – Published articles relating to periodicals

Periodicals	Number of articles
Rev. Esc Nurses USP	04
Rev. Gaúcha de Enfermagem	02
Rev. Saude Publica	01
J Bras Psiquiatr	01
CAD. Public Health	01
Rev. bras. Epidemiol	01
Rev. Bras. de Enfermagem	01
Cogitare nurses	01
Cienc. collective health	01

As the table 3, 13 articles were found; eight articles were published in journals in the field of nursing in Brazil such as: Revista USP School of nursing, Journal of nursing, Revista Gaúcha de Enfermagem and Revista Brasileira de Epidemiologia, among others.

We see an even distribution of the publications of articles in journals cited. In Journal of nursing school-USP emerged, in scientific publications on the subject, given there are four published articles. In the face of this sample, we observe that the articles published record the same authorship, which demonstrates the interest in the area of health, with emphasis on sleep and its peculiarities.

Table 4 – Place of performance of the research

Search location	Number of articles
Public/University Hospital	11*
Private hospital/philanthropist	02

* 1 Adelaide-Australia/1 Porto-Portugal

The vast majority of the research was carried out in public hospitals or/and university students, we know that approach and acceptance of research come true for these institutions are teaching, we realize that these institutions invest in the development of research and knowledge on the subject. Noting that two public hospital scenarios used were in the city of Adelaide in Australia and another in the city of Porto in Portugal. Among the publications, investigated two articles used a private/philanthropic hospital scenario.

Table 5 – Instruments used in the research reviewed

Instruments used	Number of articles
Sleep diary (Evaluation of the sleep-wake cycle)	05
Questionnaire of Horne and Östberg (Identification questionnaire of morning and evening individuals)	03
Visual Analog Scale (VAS)	02
Pittsburgh sleep quality index (PSQI)	02
Autofill questionnaires	02
Epworth Sleepiness scale (ESE)	01
Bianchi Stress scale modified (EBSm)	01
State-trait anxiety inventory (IDATE)	01
Psychological testing of Battery of WAIS (evaluates short-term memory, necessary for the execution of task)	01
Semi-structured interview	01

Identify the importance in addressing about the instruments that were used for the identification of the sleep disorder and its harms, as in the case of a relevant subject in the Middle, the instruments of scientific research serve as the fundamental basis for the findings, knowing that some research used more than an instrument for achieving the goal of your study. Whereupon we will discuss about them: the sleep journal was one of the most widely used instruments in the polls, the sleep journal is used to investigate the pattern of sleep in professionals who work in day or night shift in which the informant notes daily information about the timetables of sleep and wake up, sleep quality and perception. The sleep journal included visual analog scales to measure sleep quality and feel to wake up the daytime and nighttime sleep (Oliveira & Martino, 2013).

Other instrument used was the multidimensional questionnaire and auto populated in the polls that were used this instrument, the questionnaire was organized and produced by the researcher, which addressed individual characteristics, demographic and socioeconomic data on the general state of health. Addressing the harms of possible sleep disorders or changes in relation to the health of professionals (Mendes & Martino, 2012).

The sleep quality index Questionnaire of Pittsburgh is a self-autofill questionnaire that is intended to evaluate the characteristics of sleep patterns and quantify the sleep quality of the individual (Rocha & Martino, 2010).

We got only one study that had the Epworth sleepiness Scale of study as an instrument, this range was developed by Murray w. Johns, the Sleep Disorders Center of the Epworth Hospital, Melbourne, Australia.

This scale was planned as a simple questionnaire, easy to apply, in order to provide a general measure of the degree of daytime sleepiness. In the application of this instrument, the person asked to estimate the trend for falling asleep in eight monotonous situations of daily life, emphasizing that it is not just fatigue. The respondent must provide a note of zero to three, quantifying their tendency (probability) to not fall asleep; the notes given to each of the eight questions are added; the total of 10 or more points and indicative of the presence of excessive daytime sleepiness and 16 or more of breathing disorder or sleep apnea syndrome (Souza, 2007).

The last three instruments address the sleep disorder relating to other themes, which are: stress, anxiety and memory, these scales make association with the sleep disorder.

The Bianchi Range of Stress modified used in one of the studies describes how stress can be related to the factor of sleep changes. The Bianchi Range of Stress allows you to identify and classify the stress of nurses in the hospital environment. The instrument has been validated and has been used in several polls (Rocha & Martino, 2010).

Inventory instrument State-Trait Anxiety applied identifies anxiety, both from the point of view of anxiety trait (tendency to perceive circumstances threatening) and anxiety state (temporary emotional state).

The last scale that was captured in the articles was the Psychological Test battery of WAIS that evaluates short-term memory, necessary for the performance of that task (Oliveira & Martino, 2013).

The research analyzed we highlight some results, namely:

- More than 50% of the nursing professionals present sleep disorders described effort to stay awake in working days, suffering extreme drowsiness and there were reports of medication prescribed for sleep (Dorrian, Paterson, Dawson, Pincombe, Grech & Rogers, 2011).
- The physiological and psychological suffering that the lack of sleep triggers on health and life (Medeiros, Macêdo, Oliveira & Ribeiro, 2009).
- The prevalence of excessive daytime sleepiness (Dorrian *et al.*, 2011; Souza, 2007).
- The complaint of insomnia being developed by nursing professionals (Robaina *et al.*, 2009).
- Health symptoms reported by nursing professionals who work in shifts and have your sleeping pattern changed were gastrointestinal changes (disturbance of appetite, a feeling of indigestion), weight gain, irritability, insomnia, headaches, trouble concentrating, feeling of depression or misery, sensation of decreased self-esteem and mood lability (Oliveira & Martino, 2013).
- The harms to health as the body weight gain, headaches; appetite disorders (Martino, 2009).
- Chrono biologic profile of nurses does not translate their subjectivities in the relation of sleep with shifts; night nurses are more in the sleep-wake cycle disorders; such malfunctions also affect daily lives of nurses of both shifts (Xavier & Vagheti, 2012).
- There was a significant correlation between stress and sleep, points out that the level of stress can be a factor directly correlated with sleep (Rocha & Martino, 2010).

CONCLUSION

We have identified that this timeframe the subject is approached in the Middle recently scientific, whose main periodicals publication were vehicles, facilitating the spread of knowledge and because it is a subject that is completely in the midst of nursing professionals. This allows the health care of those professionals who always promote the other.

From the analysis and discussion of articles we can conclude that the harms of health for sleep disorder affect the nursing professionals, causing several changes in worker health, the data show how the sleep wake cycle dyssynchrony, sleep deprivation, disorders of

insomnia and excessive daytime sleepiness cause diseases that affect the health of nursing professionals. Scores of the other topics such as stress and anxiety, that collaborate for a sleep disorder.

Finally, the need for preventive actions for these harms the health of the worker, how to respect the working hours, rest time of these professionals, offer strategies for relief of tensions and stress of the job; as aid groups, guidance as to the environment in the period of rest at home, the need for sleep replacement for physiological and psychological benefit, anyway to promote actions and practices that improve the quality of life of nursing professionals and mitigate the harms of sleep disorders.

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Correspondência: souzaannadi@hotmail.com