QUALITY AND SLEEP DISTURBANCES OF THE NURSING STAFF OF A THERAPY UNIT

CALIDAD Y TRASTORNOS DEL SUEÑO DEL EQUIPO DE ENFERMERÍA DE UNA UNIDAD DE TERAPIA

ABSTRACT

Objective: verifying the quality of sleep and sleep disorders from the nursing staff of an Intensive Care Unit. Methodology: a prospective, descriptive study of a quantitative approach, consisting of 17 employees of the nursing staff. The instruments for data collection were: the identification document and the Pittsburgh Sleep Quality Index - PSQI, after approval of the research project by the Research Ethics Committee, protocol n. 075/11. The results, quantified by the Microsoft Excel 2007 program, were analyzed and presented in tables, based on the literature discussed. Results: overall, 15 (88,24%) of the surveyed professionals obtained higher scores than five, indicating poor sleep quality. Conclusion: it was demonstrated that the sleep quality of nursing professionals who participated in the survey is bad. The workers, because they have irregular hours of sleep, are unable to restore to the next day, and this compromises their performance at work. Descriptors: Sleep; Nursing Staff; Intensive Care Units.

RESUMO

Objetivo: verificar a qualidade do sono e os distúrbios do sono da equipe de enfermagem de uma Unidade de Terapia Intensiva. Metodologia: estudo prospectivo, descritivo, de abordagem quantitativa, composto por 17 funcionários da equipe de enfermagem. Os instrumentos para a coleta dos dados foram: a ficha de identificação e o Índice de Qualidade do Sono de Pittsburgh - PSQI; após a aprovação do projeto de pesquisa pelo Comitê de Ética em Pesquisa, protocolo nº 075/11. Os resultados, quantificados pelo Programa Microsoft Excel 2007, foram analisados e apresentados em tabelas, discutidos com base na literatura. Resultados: de modo geral, 15 (88,24%) dos profissionais pesquisados obtiveram escores maiores que cinco; o que indica qualidade de sono ruim. Conclusão: demonstrou-se que a qualidade do sono dos profissionais de enfermagem que participaram da pesquisa é ruim. Os trabalhadores, por terem horas irregulares de sono, não conseguem se restaurar para o dia seguinte, o que compromete seu desempenho no trabalho. Descritores: Sono; Equipe de Enfermagem; Unidades de Terapia Intensiva.

RESUMEN

Objetivo: verificar la calidad del sueño y los trastornos del sueño del personal de enfermería de una Unidad de Cuidados Intensivos. Metodología: un estudio prospectivo y descriptivo, con enfoque cuantitativo, compuesto por 17 empleados del equipo de enfermería. Los instrumentos para la recolección de datos fueron el Formulario de Identificación y el Índice de Calidad del Sueño de Pittsburgh - PSQI, después de la aprobación del proyecto de investigación por el Comité de Ética de la Investigación, el protocolo nº 075/11. Resultados: cuantificados por el programa Microsoft Excel 2007, fueron analizados y presentados en tablas, con base en la literatura discutida. Resultados: en total, 15(88,24%) de los profesionales encuestados tenían una puntuación más alta de cinco; lo que indica una mala calidad del sueño. Conclusión: se demostró que la calidad del sueño de los profesionales de enfermería que participaron en la investigación es mala. Los trabajadores, por tener horas irregulares de sueño, no se pueden restaurar al día siguiente, lo que perjudica su rendimiento en el trabajo. Descriptores: Sueño; Personal de Enfermería; Unidades de Cuidados Intensivos.
INTRODUCTION

Sleep is an essential part of life, is a period of physical restoration that protects the living being from the natural wear of the activities he plays when he is awake.1,13 There are two fundamental patterns of sleep that alternate with each other: the sleep of the rapid eye movement (REM) and the sleep of non-rapid eye movement (NREM).2,4,5 On a normal night sleep, REM sleep alternates with NREM sleep about every 90 minutes on average, and lasts five to 30 minutes.2,4

When the person who works at night tries to sleep during the day, changing of the internal structure of sleep occurs. In the first half of the night sleep is deeper; there is a predominance of NREM stage. In the second state, REM sleep, sleep activated alternatively called paradoxical or desynchronized, brain waves are low amplitude and variable frequency similar to those of the waking state and a threshold for awakening higher than in slow-wave sleep.5

The light changes the phase of the circadian clock by a cascade of events within the Suprachiasmatic Cell Nucleus (SCN) and includes activation of gene Mouse period1 (mPer1). The information clarity/darkness is transmitted via the retino-hypothalamic tract, the retina (the only receiver of information) to the SCN and from this nucleus to the pineal gland which regulates secretion of melatonin has an effect of synchronization of circadian marker. Being strongly suppressed in the presence of light, increases up to a certain plateau during sleep and decreases again with Wake.6,7

In Brazil, the relationship between work and worker health form a mosaic, for coexisting multiple work situations characterized by different stages of technological development, organization, management, relationships and ways of working, which is reflected on the live contract, sick and workers die.8 Thus, job satisfaction comes from the complex and dynamic interaction of general living conditions, labor relations, labor process and control that workers have over their conditions of life and work.9

Work schedules in hospital and homecare are usually organized in continuous fixed or rotating shifts of eight or 12 hours duration. Currently, the most widely adopted in Brazil for the nursing staff is the 12-hour shift working day (day or night), followed by 36 hours off.10 Thus, the number of consecutive work shifts, duration, flexibility system, start and end of shifts can lead many professionals to present these changes in the pattern of habitual sleep on physiological and cognitive functions, which are expressed in a rhythmic manner.11 Therefore, the great challenge of the night worker is undoubtedly, adjust your lifestyle to biological principles and social coexistence, because discouragement associated with fatigue causes disappears interest in social life and leisure.12

In the last decades, the economic and social transformations resulting from globalization have significantly altered the relationship between man and his work. One aim, increasingly, associated with a large low cost of production in order to obtain highly competitive products productivity. In this scenario, there is an increase of rhythms and workloads at the expense of worker satisfaction in performing tasks, which may influence the quality of life and interfere with the health/disease process. Thus, from these considerations, it was decided to conduct a study on the sleep quality of the nursing team that acts in a adult Intensive Care Unit (ICU).

OBJECTIVE

- Checking the quality of sleep and sleep disorders from the nursing staff of an Intensive Care Unit.

METHODOLOGY

This is a prospective, descriptive study with a quantitative approach. The population consisted of 17 (100%) employees of the nursing team, consisting of nurses, technicians and nursing assistants who work day and night shift ICU of a hospital in the Paraiba valley.

The study included subjects who agreed to participate in the study and signed a consent form prepared in accordance with Resolution 196/96 and 251/97 of the National Health Council, which regulates research protocols involving human beings. Thus, they were excluded from the study subjects who refused to participate in the study, those who were on sick leave or on holiday, the period of data collection, and those who did not return the questionnaires within the deadline set by the researchers.

The data were collected during June and July 2011. The research project was submitted to the Research Ethics Committee of the University of Taubate under CEP/UNITAU n. 075/11 number, and the responsible institution signed Authorization Term Facility.

The instruments used for data collection were: identification form and Questionnaire Pittsburgh Sleep Quality Index - PSQI.
The identification sheet was used to characterize the socio-demographic data of nurses. Prepared by own researchers for this study, the form includes questions related to identification and workplace of nurses.

The Pittsburgh Sleep Quality Index (PSQI) was used to measure the quality of sleep. The questionnaire was adapted and validated. The scale ranges from zero to 21. Scores greater than five imply poor sleep quality.\textsuperscript{12} The questions are related to sleep habits only during the previous month.

The results, quantified by the Microsoft Excel 2007 program, were analyzed and presented in tables. Subsequently, were discussed based on the literature survey.

**RESULTS AND DISCUSSION**

The obtained results regarding the identification of the sample show a female predominance in 14 (82.35\%) of the participants, and 3 (17.35\%) participants were male. These data corroborate with those found in the 2005 survey of 126 employees of the nursing staff who work in ICU in a university hospital in São Paulo-SP, in which 104 (85.5\%) were female.\textsuperscript{14} Also corroborate the data of a survey conducted in a Emergency Unit of Passos - Minas Gerais, with 16 workers, 14 technicians and two nurses, in which the majority was female.\textsuperscript{15} This result shows that, in nursing, the prevalence is female.

Their ages ranged from 20 to 49 years old, and the predominant group in 7 (41.18\%) of the professionals were 30-49 years old, followed by 5 (29.41\%) between 20 and 29 years old and 5 (29.41\%) between 40 and 49 years old. These data corroborate with those found in a survey conducted in a hospital in a study.\textsuperscript{16} This has demonstrate that currently, the shift 12X36 h is the most frequent, which facilitates the employee, in a way, having a second job.

As for the number of children, it is observed that the majority, 10 (58.82\%) had no sons, and 7 (41.18\%) had one to two sons. Different result was found in a survey of 173 nursing workers of the night shift at a university hospital in Curitiba - Paraná, in 2008: more than half, 74\%, had children.\textsuperscript{18} The research has shown that although the participants are in childbearing age, they are wary of having children.

In Table 1 we observe the predominance in 10 (58.83\%), to shift 12x36, corroborating research conducted in 1999 at the Central Institute of the Clinical Hospital of the Faculty of Medicine, University of São Paulo, São Paulo - SP, with 45 employees who participated in the second stage of a sleep study. However, this survey showed that 26 people worked 12 hour shifts in a row (day or night) followed by 36 hours off, 19 who worked in shifts and other schemes which 13 worked in shifts six or eight hours diurnal.\textsuperscript{11} This has demonstrate that currently, the shift 12X36 hours is the most frequent, which facilitates the employee, in a way, having a second job.

For the period, 10 (58.83 \%) of the participants are the night shift, as
demonstrated in Table 1. In a survey conducted in 2008 in a hospital in Curitiba - PR, a referral center in healthcare for medium and high complexity of SUS, 173 workers need to work at night.16 may be noted that this research predominated night shift because most of the participants who agreed to participate in this working shift.

It is observed in this study that 13 (76.48%) of respondents have the habit of watching television before bedtime, 2 (11.76%) listening to music, and 2 (11.76%) using the computer. In the study in a University of Vale do Paraíba Paulista, in 2009, with 58 respondents, 36 of them nurses, the result was similar: 35 (60.34%) watched television and 18 (31.03%) used the computer, which can interfere with the beginning and the performance of sleep-wake cycle in the restorative sense.20

When asked about the condition of the environment for sleep, if it was peaceful, airy and dark prevailed in 14 (82.35%) affirmative response, and 3 (17.65%) said no. Corroborating research from the University of Vale do Paraíba Paulista, with 58 participants, 49 (84.48%) answered yes, a result which shows that sleeping in an airy and calm allows restorative sleep.20

Regarding the practice of regular physical activity, 15 (88.24%) answered no, and 2 (11.76%) yes. This corroborates findings in research conducted in a general hospital in the Rio Grande do Sul-RS in the period June-August 2005: 56% did not physical practice.21 Activity can be observed that participants do not have the habit of exercising physical, which is essential for the daily life and an important factor for regulating sleep.

Table 2. Index of the Sleep Pittsburgh Quality of (ISPSQ). Taubaté-SP, 2011.

<table>
<thead>
<tr>
<th>Level of sleep quality</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good score &lt;5</td>
<td>2</td>
<td>11.76</td>
</tr>
<tr>
<td>Bad score &gt;5</td>
<td>15</td>
<td>88.24</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>100</td>
</tr>
</tbody>
</table>

Shown in Table 2 was the index of sleep quality: 15 (88.24%) of the professionals had higher scores than five, which represents poor sleep quality. This corroborates findings in a study conducted in 2007, about the poor quality of sleep, with 75 nurses who worked in the ICU of the Central Institute Hospital das Clinicas of the Faculty of Medicine, University of São Paulo (ICCH)/USP: 25 were nurses and the evaluation of quality Index Pittsburgh Sleep (ISPQ), it was found that 100% had poor sleep quality, and, in the group of 50 nursing assistants, it was found that 88% had poor sleep quality, ie, higher scores than five.19 This research pointed out that sleep of those workers have compromised quality due to fatigue caused by shift work, which negatively interferes with all activities.

Table 3. Distribution of classification of sleep disorders. Taubaté-SP, 2011.

<table>
<thead>
<tr>
<th>Reasons</th>
<th>Never</th>
<th>Less than once a week</th>
<th>Once or twice a week</th>
<th>Three times a week or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take more than 30 minutes to fall asleep</td>
<td>3</td>
<td>17.65</td>
<td>5</td>
<td>29.41</td>
</tr>
<tr>
<td>Wake up in the middle of the night or very early in the morning</td>
<td>3</td>
<td>17.65</td>
<td>3</td>
<td>17.65</td>
</tr>
<tr>
<td>Get up to go to the bathroom</td>
<td>5</td>
<td>29.42</td>
<td>2</td>
<td>11.76</td>
</tr>
<tr>
<td>Have breathing trouble</td>
<td>13</td>
<td>76.48</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Cough or snore too loud</td>
<td>12</td>
<td>70.60</td>
<td>2</td>
<td>11.76</td>
</tr>
<tr>
<td>Feel very cold</td>
<td>1</td>
<td>5.88</td>
<td>5</td>
<td>29.41</td>
</tr>
<tr>
<td>Feel very hot</td>
<td>13</td>
<td>76.48</td>
<td>2</td>
<td>11.76</td>
</tr>
<tr>
<td>Having bad dreams or nightmares</td>
<td>8</td>
<td>47.06</td>
<td>4</td>
<td>23.53</td>
</tr>
<tr>
<td>Feel pain</td>
<td>8</td>
<td>47.06</td>
<td>5</td>
<td>29.42</td>
</tr>
</tbody>
</table>

In Table 3, we observe that: 6 (35.29%) took more than 30 minutes to fall asleep in once or twice a week, 9 (52.94%), three times a week awaken in the middle of night or very early morning, 8 (47.06%), three times a week, or more, posing for the bathroom; 13 (76.48%) reported not having trouble breathing, and 12 (70.60%) had no cough and no snored too loud; 8 (47.06%), once or twice a week, felt very cold, 13 (76.48) did not feel too hot, 8 (47.06%) did not have nightmares or bad dreams, and 8 (47.06%) reported not feeling pain. In a survey performed with nursing students, of a University of Vale do Paraíba Paulista, in 2009, it has been observed data relating to sleep disorders. This showed that 37.93% of participants reported waking up at night, or very early in the morning and 22.41% answered take more than 30 minutes to fall asleep, three times a week or more.20

Regarding the use of sleeping pills last month, it was observed that 14 (82.36%) did not take medicine, 2 (11.76%), three times a week, and 1 (5.88), less than once per week. A similar result was found in a study in a University of Paraiba valley, in 2009, which showed that 214 (89.54%) do not use sleep medications, and 25 (10.46%) Yes, less than once a week. In another study, performed in a Hospital of the State University of Campinas, English/Portuguese

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1113
Santos TCMM dos, De Faria AL, Feitosa MS et al.

Campinas-SP, in 2002, with 59 participants, 15 reported no use of sleep medication. 23

When asked if the participants had trouble staying awake, doing other activities in the past month, it was observed that 12 (70.60%) did not, 3 (17.64%) once or twice a week, and 2 (11.76%) three times per week or more.

Table 4. Distribution as for nap and need. Taubaté-SP, 2011.

<table>
<thead>
<tr>
<th>Variables</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nap</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>11</td>
<td>64.71</td>
</tr>
<tr>
<td>No</td>
<td>6</td>
<td>35.29</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>100</td>
</tr>
<tr>
<td>Why do they nap?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>For pleasure</td>
<td>4</td>
<td>23.55</td>
</tr>
<tr>
<td>It’s a need</td>
<td>8</td>
<td>47.05</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>11.76</td>
</tr>
<tr>
<td>No answer</td>
<td>3</td>
<td>17.64</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>100</td>
</tr>
</tbody>
</table>

In Table 4, it is observed that 11 (64.71%) reported napping, corroborating with the results of the research on occupational stress in nurses of Vale do Paraíba Paulista, in 2008, in which it can be seen that 135 (56.49%) refer napping. 22

It is observed the need for napping, which predominated 8 (47.05%). Similar data were found in a study conducted with nurses from the Vale do Paraíba Paulista region, in 2008, in which 70 (51.85%) answered that need by. 22

CONCLUSION

It was stated that the sleep quality of the surveyed nurses is bad. The workers, for having irregular sleeping hours, are unable to restore to the next day, which impairs their work performance.

REFERENCES


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