

PERCEPTION OF THE QUALITY OF LIFE OF INTENSIVE CARE NURSING PROFESSIONALS

PERCEPÇÃO DA QUALIDADE DE VIDA DE PROFISSIONAIS DE ENFERMAGEM DE TERAPIA INTENSIVA

PERCEPCIÓN DE LA CALIDAD DE VIDA DE LOS PROFESIONALES DE ENFERMERÍA DE CUIDADOS INTENSIVOS

Bruno Fernando Moneta Moraes ¹
Milva Maria Figueiredo De Martino ¹
Jaqueline Girnos Sonati ¹

¹ Universidade Estadual de Campinas – UNICAMP, Faculdade de Enfermagem, Programa de Pós-Graduação. Campinas, SP – Brazil.

Corresponding author: Bruno Fernando Moneta Moraes. E-mail: bruno-fernando@uol.com.br
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ABSTRACT

This research aimed to investigate the perception of the quality of life of nursing professionals working in Adult Intensive Care Units and its relation with the average time of sleep and physical activity practice. A cross-sectional research was carried out with 224 nursing professionals from six intensive care units of the Metropolitan Regions of Sorocaba and Campinas, in São Paulo State. The data were collected between August 2015 and January 2016. A questionnaire was used to characterize the sociodemographic, sleep and physical activity data. The perception of quality of life was evaluated using the WHOQOL-Bref instrument. A significance level of 5% was considered for all the analyzes, and the statistical software SAS version 9.4 was used to perform them. There was a prevalence of married females in the role of nursing technicians, with a mean age of 36.12 (SD = 8.26) years old. The majority of the subjects slept on average less than six hours a day and did not practice physical activity, which caused them to significantly reduce the means of the domains on their quality of life. It was concluded that sleep deprivation, physical inactivity and lower monthly income showed, in this research, a negative influence on the quality of life of Adult Intensive Care Unit nursing professionals.

Keywords: Sleep; Nursing; Critical Care; Quality of Life.

RESUMO

Este estudo objetivou investigar a percepção da qualidade de vida dos profissionais de enfermagem de terapia intensiva adulto e a sua relação com o tempo médio de sono e prática de atividade física. Realizou-se, para tanto, uma pesquisa transversal com 224 profissionais de enfermagem de seis unidades de terapia intensiva das regiões metropolitanas de Sorocaba e Campinas, no estado de São Paulo. A coleta de dados ocorreu entre agosto de 2015 e janeiro de 2016. Aplicou-se questionário para caracterização dos dados sociodemográficos, de sono e atividade física. A percepção de qualidade de vida foi avaliada por meio do instrumento WHOQOL-Bref. Para todas as análises foi considerado nível de significância igual a 5% e o software estatístico SAS versão 9.4 foi utilizado para a realização dessas análises. Prevaleram os indivíduos do sexo feminino, casados, na função de técnicos de enfermagem, com média de idade de 36,12 (dp=8,26) anos. A maioria dos sujeitos dormia, em média, menos de seis horas por dia e não praticava atividade física, o que determinou a eles redução significativa das médias dos domínios da qualidade de vida. Concluiu-se que a privação de sono, a inatividade física e baixa renda mensal demonstraram, neste estudo, influenciar de maneira negativa a qualidade de vida de profissionais de enfermagem de terapia intensiva adulto.

Palavras-chave: Sono; Enfermagem; Cuidados Críticos; Qualidade de Vida.

RESUMEN

El presente estudio tuvo como objetivo investigar la percepción de la calidad de vida de los profesionales de enfermería de cuidados intensivos y su relación con el tiempo promedio de sueño y la práctica de actividades físicas. Fue realizada una investigación transversal con 224 profesionales de enfermería de seis unidades de cuidados intensivos en las regiones metropolitanas de Sorocaba y Campinas, Estado de San Pablo. La recogida de datos fue llevada a cabo entre agosto de 2015 y enero de 2016. La caracterización de los datos sociodemográficos, del sueño y de las actividades físicas fue efectuada mediante una encuesta. La percepción de la calidad de vida fue evaluada por medio del WHOQOL-Bref. Para todos los análisis fue considerado el nivel de significancia igual a 5% y, para realizar los análisis, fue utilizado el software estadístico SAS versión 9.4. Prevalcieron los individuos del sexo femenino, casados, en el cargo de técnicos de enfermería, con edad media de 36,12 (desviación estándar = 8,26) años. La mayoría de los profesionales dormía un promedio de menos de seis horas al día y no practicaba ninguna actividad física, lo cual determinó una disminución importante de los promedios de los dominios de la calidad de vida. La privación de sueño, no practicar actividades físicas y el bajo ingreso mensual demostraron, en este estudio, tener impactos negativos en la calidad de vida de los profesionales de enfermería de cuidados intensivos de adultos.

Palabras clave: Sueño; Enfermería; Cuidados Críticos; Calidad de Vida.

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INTRODUCTION

Nursing is an area of human knowledge and is, currently, an extensive field work, represented by three professional categories - nurses, technicians and nursing assistants. It is legally regulated and offers a wide range of specialties, being present since the basic care up to hospital complexes with high technology.¹ In the intensive care unit (ICU), the hospital sector that provides uninterrupted care to patients in severe conditions, nursing is an indispensable professional category. According to the Brazilian Association of Intensive Medicine (AMIB - Associação de Medicina Intensiva Brasileira), in Brazil, in 2016, there were more than 41,000 ICU beds in 1961 health establishments, being the greatest strength of nursing work in this area.²

The work in the ICU, as in other hospital sectors, have its work routine segmented into shifts of different durations and intervals between the working days. The nursing care in this sector is provided continuously to patients in severe conditions, who are highly dependent on the use of technologies and materials specific to their recovery.³

The segmentation of the work in shifts, excessive workload, proximity with patients in severe conditions, living with the frequent pain and loss and laborious procedures, in addition to the low remuneration, can be a factor of physical and mental wear for professionals in this area, with consequences to the duration and quality of sleep, practice of physical activity, leisure and, consequently, to their quality of life (QoL).^{4,5}

The physical activity (PA) is an important tool for the maintenance of health, a stimulus to the vitality and performance in activities of daily routine, as well as to contribute to the improvement of the interpersonal relations. The regular practice of physical activity has been recognized as a factor functionally related to the promotion of health of individuals and the prevention of some risk conditions for disease. However, the adherence to its practice is still low among nursing professionals, sometimes due to lack of time or incentive.⁵

The physical inactivity composes the list of risks to the health of the nursing worker, along with the changes in the quality of sleep, which is essential for the restoration of the physiological functions during the night.⁴ Poor sleep quality can impair the work performance by drowsiness in the waking period, reducing the physical disposition, increasing the chances of developing chronic diseases, and affecting the perception of QoL.^{6,7}

The QoL is used today by different segments of society, covering objective and subjective aspects of the human being, as well as their need for internal and external balance, from the personal, social and professional fulfillment. This perception may be directly linked to environmental, family, healthy and labor factors, among others.⁸ The study of this concept in the

area of health of the nursing worker is a recent challenge and explicit a current concern about the health and well-being of this professional, given the characteristics of this profession.^{9,10}

This study aimed at investigating the perception of the quality of life of nursing professionals working in adult intensive care units, and their relation with the sleep time and the practice of physical activity.

METHODS

This cross-sectional study, carried out with nursing professionals (nurses, technicians and nursing assistants) working in an adult intensive care unit (ICU-A) of six general hospitals in two municipalities in the metropolitan region of Sorocaba and one in the metropolitan region of Campinas, in the interior of the state of São Paulo. The data were collected between August 2015 and January 2016.

The sample was composed of 224 nursing professionals who have agreed to voluntarily participate in this study, 149 individuals from public hospitals, with 100% attendance to the Sistema Único de Saúde (SUS - BR); 61 subjects from hospitals with mixed service (SUS, health insurance and private care service); and 14 hospitals providing care to health insurance and private clients. All the volunteers responded to the proposed instruments after signing in two copies the Free and Informed Consent Term (FICT), according to the Resolution No. 466/2012 of the Ministério da Saúde (BR).

Two self-administered questionnaires were used, the first containing data on sex, age, function, income, marital status, physical activity and average daily sleep time. In order to verify the perception of quality of life, the WHOQOL-Bref instrument was used in the Portuguese version, translated and validated by Fleck *et al.*¹⁰. To answer the 26 questions of this instrument, the individual was instructed to consider aspects experienced in the last 15 days. The four quality of life domains of the questionnaire were considered: physical, psychological, social relations and environment.

Descriptive analyzes were performed to characterize the sample. And for the comparisons involving the variable of physical activity in relation to the variables of quality of life, the Mann-Whitney non-parametric test was applied. The comparisons involving the time-related variables of sleep and quality of life were made using the Kruskal-Wallis test and the Dunn post-test. For all the analyzes, it was considered a significance level of 5% and the SAS *statistical software* version 9.4 was used for these analyzes.

The study was approved by the Research Ethics Committee of the Universidade Estadual de Campinas (UNICAMP), under the Opinion No. 1,047.641.

RESULTS

The sociodemographic characteristics (Table 1) showed that the majority of the nursing professionals interviewed were female, married, exercising the function of nursing technician, with only one employment relationship and income between three and five minimum wages, considering all the their employment contracts. In addition, the majority of the participants reported sleep time average of 6 hours per night and the non-practice of physical activities. The mean age of these professionals was 36.12 (SD=8.26) years old.

Table 1 - Sociodemographic, sleep and physical activity characteristics of ICU nursing professionals, São Paulo, Brazil, 2016

Variables	n	%	
Sex	Female	157	70.09
	Male	67	29.91
Marital Status	Married	128	57.40
	Single	63	28.25
	Widow(er)	2	0.90
	Separated	25	11.21
	Others	6	2.24
Function	Nursing Assistant	36	16.07
	Nursing Technician	133	59.38
	Nurse	55	24.55
No. Employment Contracts	1	144	64.29
	2	78	34.82
	More than 2	2	0.89
Income (minimum wages*)	≤ 3	64	29.77
	> 3 and ≤ 5	94	43.72
	> 5 and ≤ 7	36	16.74
	> 7	21	9.77
Sleep Time (Hours)	≤5	44	19.73
	6	72	32.29
	7	42	18.83
	8	49	21.97
	≥9	16	7.17
Physical activity	Yes	95	42.41
	No	129	57.59

*Minimum wage at the time of the survey: R\$ 788.00.

The quality of life presented scores lower than 75, being the highest score observed for the physical domain (69.53) and the lowest for the environment domain (56.82) (Table 2). The physical and psychological domains had means below the medians and the social domain had a minimum value of zero (Figure 1).

When comparing mean sleep time between the domains of quality of life, a statistically significant difference between them was observed by the Kruskal-Wallis test, except for the

environment domain, although the mean increased as the sleep time increased (Table 3). It was applied the Dunn's post-test, which showed a statistically significant difference between the groups, as shown in Table 3.

Table 2 - Domains of quality of life of ICU nursing professionals, São Paulo, Brazil, 2016

Variables	Mean (SD)	SD	Median
Physical	69.53	14.56	71.43
Psychological	68.21	14.61	70.83
Social Relations	67.37	18.13	66.67
Environment	56.82	13.86	56.25

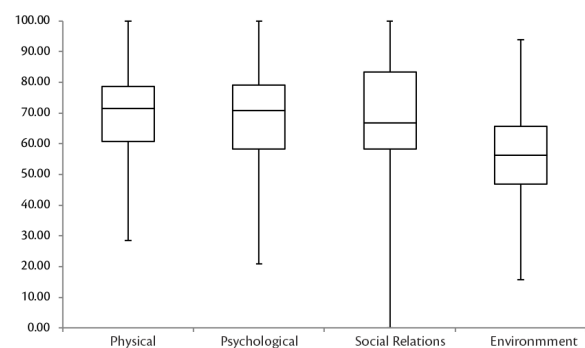


Figure 1 - Distribution of the quality of life scores of the ICU nursing professionals, by domain.

The lack of physical activity was also decisive for low scores of quality of life. When comparing the quality of life of individuals who practice physical activities with the quality of life of those who reported not to practice it, a statistically significant difference was observed by the Mann-Whitney test for perception in all domains (Table 4). It was also found that the domain with the highest score for individuals who practice physical activities was the physical domain, and the lowest score was for the environment.

DISCUSSION

The predominance of the female sex is still a characteristic of the nursing profession and is related to historical and cultural aspects that go back to the beginnings of the profession, although the data of this research are below the national average and the state of São Paulo – 85.6 and 83.3%, respectively.¹¹

A greater number of nursing technicians also follows the national trend, according to the latest information from the DATASUS, from 2010.¹² However, it is concerning the role of the nursing assistants in the ICU, since that the scenario found in the present study is in disagreement with the Resolutions of the Board of Directors (RDC - Resoluções de Diretoria Colegiada) number 7, which rules only the presence of nurses and nursing technicians in the ICU.³

Table 3 - Comparison between the different sleep times referred to and the domains of quality of life of ICU nursing professionals, São Paulo, Brazil, 2016

Domains		≤ 5 hours (n=44)	6 hours (n=72)	7 hours (n=42)	≥ 8 hours (n=65)	P-Value*
Physical	Mean (SD)	62.74** (16.45)	66.82** (13.82)	70.49 (12.74)	76.81** (11.86)	<0.0001
	Median	60.71	71.43	71.43	75.00	
Psychological	Mean (SD)	64.49** (17.34)	64.87** (14.93)	70.54 (11.40)	73.53** (11.54)	0.0033
	Median	66.67	66.67	72.92	75.00	
Social Relations	Mean (SD)	59.47** (17.29)	66.20 (19.68)	70.83** (14.29)	72.31** (17.00)	0.0010
	Median	58.33	66.67	75.00	75.00	
Environment	Mean (SD)	55.54 (14.76)	54.99 (12.69)	57.81 (13.58)	59.62 (13.91)	0.2145
	Median	53.13	56.25	56.25	59.38	

*p-value obtained through the Kruskal-Wallis test. Significant results in bold.

** Dunn's post-test.

Table 4 - Comparison between the quality of life of ICU nursing professionals who practice and do not practice physical activities, São Paulo, 2016

Variáveis	Practice of physical activities	Mean	SD	Median	P-Value*
Physical	Yes (n=95)	73.80	13.20	75.00	0.0001
	No (n=129)	66.39	14.77	67.86	
Psychological	Yes (n=95)	71.93	13.84	75.00	0.0008
	No (n=129)	65.47	14.61	66.67	
Social Relations	Yes (n=95)	71.23	15.36	75.00	0.0211
	No (n=129)	64.53	19.50	66.67	
Environment	Yes (n=95)	60.30	12.91	62.50	0.0009
	No (n=129)	54.26	14.03	53.13	

* P-value obtained through the Mann-Whitney test. Significant results in bold.

Regarding the number of employment contracts, the results of this study showed that 34.82% of the subjects have two jobs, a rate above the national average, which is 25.1%¹¹. The double-contract is still a common practice for a quarter of the nursing professionals in Brazil, due to low remuneration, which causes a high workload and possible changes in their quality of life.^{4,11,13}

Regarding the monthly income declared, considering all the contracts, the majority of the individuals in this study presented earns above the national average, which indicated earnings between R\$ 1,0000 and R\$ 3,000 monthly.¹¹ It must be considered, however, that this average wage published by the Federal Nursing Council does not specify the number of employment contracts. Currently, the low remuneration is a reality for Nursing, since there is no national minimum wage regulations for this category. As a result, several studies have shown nursing professionals' dissatisfaction with their remuneration, having it impact their quality of life.^{4,13} Given this reality of income impact on the quality of life, in this study, the general analysis of the WHO-QOL-Bref scores showed a lower mean for the environmental domain, although its value was slightly above the median.

The ICU is a sector in which there is a large volume of noise from audible alarms of different equipment, artificial lighting, in addition to complex procedures and conviviality with pain and loss, which reduced the perceived healthiness of the physical environment for nursing professionals. This is corroborated by a Brazilian study¹³, although it is below the number of specific publications about the quality of life of ICU nurses. Even though the issue of the physical environment is not specific to the work environment, it is believed that most respondents considered the ICU environment to respond to this item, due to the description of "climate and noises" in brackets in the question. The results of the assessment of this domain can demonstrate aspects to be improved, both regarding the professional and personal aspects of these professionals.

It is important to emphasize that the physical and environment domains presented mean scores below the median, characterizing a poor perception of the quality of life according to the classification of areas in the study of Vagetti *et al.*¹⁴.

The social relations domain presented the second lowest average, despite being slightly above the median. However, it is noteworthy that it is the only domain with a minimum value of zero (Figure 1). The social relations evaluate the social circle, sexual life and support from family and friends. Because it is a profession whose regime is segmented in shifts, some of the individuals in this research work at times that are incompatible with other people in their families, spouses and friends, which may limit their participation in social activities, which is highlighted in other studies with shift workers. This domain was also influenced by sleep and by the practice of physical activities. The incompatibility of schedules, working in shifts, particularly at night, and the deprivation of sleep are factors that may determine less inclination for the practice of physical activities, which justifies its relationship with the social domain.⁹

The physical domain had the highest mean in this study, compared to the other domains (69.53), which is reinforced by other similar studies.^{15,16} This result was certainly provided by the young-

er profile of the professionals studied, whose mean age was 36.12 years old. This characterizes less occurrence of chronic pain, need for medical treatment and more willingness for daily activities.

However, regarding physical activities, more than half of the subjects studied (57.59%) reported not adhering to their practice, a percentage above the national mean, which was of 45.9% physically inactive individuals in the Brazilian population in 2013.¹⁷ This has significantly influenced the reduction of the scores for all the WHOQOL-Bref domains.

Practicing a physical activity promotes a better perception of the quality of life and is in agreement with other similar studies involving health professionals and the general population.^{5,18-21} In the study of Acioli *et al.*²¹ with 246 ICU health professionals and of Freire *et al.*⁵ with 59 professionals from the same area, the quality of life of the subjects practicing physical exercises was superior in several aspects, especially in physical health. In both studies, nursing technicians was the most active professional category.

Regarding the mean sleep time, the results show a greater proportion of subjects who sleep, on average, six hours a day. However, the sum of those who sleep less than six hours a day represents more than half of the sample and reflects another recurrent problem in nursing, namely sleep deprivation, mainly due to issues such as double contracts, night work and difficulties for sleeping during the day.²²⁻²⁴

Sleep deprivation in ICU nursing professionals may lead to cognitive, psychological and circadian rhythm dysfunction disorders with high risks of developing chronic non-communicable diseases (CNCDs) in the long term, as well as negative impact on the quality of life.^{21,25} Reporting sleep less than six hours was determinant, in this study, to reduce quality of life indices in all the domains, except the environment, when compared to individuals who sleep more than seven hours a day.

It is important to highlight that this study has limitations, such as not using a specific questionnaire for checking the level of physical activities in the population studied. However, it was possible to establish a diagnosis of the implications of physical activities and sleep in the quality of life of ICU nursing professionals, which stresses the need of interventions for the health of this population as measures to encourage the practice of exercises within health institutions. In addition, regulations for the nursing category, as the promulgation of the minimum wage and working day of 30 hours, will allow more time for the practice of physical activities and rest.

CONCLUSION

The sleep time and the practice of physical activities were important factors for the promotion of the quality of life of the intensive care nursing worker. Sleep deprivation and sedentary lifestyle, in this study, negatively influenced the percep-

tion of quality of life in its different domains. The insufficient remuneration was also a factor of reduction in the quality of life in the environment domain, being a relevant factor for the ICU nursing professionals.

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