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ANXIETY AND DEPRESSION AMONG NURSING PROFESSIONALS OF A BRAZILIAN NEONATAL INTENSIVE CARE UNIT

^{1,*}Reginaldo Passoni dos Santos, ^{1,2}Ariana Rodrigues da Silva Carvalho, ²Bruna Biederman, ²João Lucas Campos de Oliveira, ^{1,2}Cláudia Silveira Viera and ^{1,2}Beatriz Rosana Gonçalves de Oliveira Toso

¹UNIOESTE - Western Paraná State University, Postgraduate Program in Biosciences and Health, 2069 University's Street – Cascavel – PR, Brazil 85819-110

²UNIOESTE, Undergraduate Nursing Course

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ABSTRACT

Objectives: To verify the anxiety and depression and the related factors among nursing professionals of a Brazilian neonatal intensive care unit.

Methods: Descriptive, cross-sectional and quantitative study. In a sample (n = 26) of nursing workers, a form was used for socio demographic and occupational characterization; and applied the Brazilian version of the Hospital Anxiety and Depression Scale. To the data tabulated, we performed descriptive and inferential statistical analysis.

Results: Anxiety and depression were present in 13 (50%) and seven (26.9%) professionals, respectively. These mental states presented direct and significant correlation ($r=0.65$, p -value: <0.001), being more frequent in professionals aged between 29 and 45 years; who were not married; had children; engaged in mid-level activities; received more than eight minimum wages; worked at night and performed overtime. No personal or work variables were associated with anxiety and depression.

Conclusion: The presence of anxiety and depression symptoms, in the sample studied, was greater than that described in the literature.

*Corresponding author

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INTRODUCTION

The uninterrupted undulations of society impose differences in the production of human labor, with repercussion on factors that can be noticed in the health of the worker, including the nursing ones, that deal directly with care situations that can be exhausting. Factors such as long working hours, ineffective interpersonal communication, low professional autonomy and high emotional load, among others, contribute to these workers being vulnerable to occupational stress (Oliveira, 2013; Ferreira, 2017; Guerra, 2016 and Cricco-Lizza, 2014). Commonly, stress is related to symptoms of anxiety and depression. In this sense, it is confirmed that anxiety causes a

diffuse and unpleasant feeling of apprehension, which can affect the thought, memory and sensory perception, besides producing mental confusion and compromising social relations (Gomes, 2013). On the other hand, depression is characterized by the prolongation / aggravation of depressive symptoms and mood variation, which unfolds in the individual's ability to see the world and the altered reality (Silva, 2015). Like stress, situations that generate anxiety and depression are also frequent among nursing staff and these mental states can affect both the health of the professionals (Oliveira, 2013; Ferreira, 2017; Guerra, 2016 and Cricco-Lizza, 2014) and the quality of care produced (Gomes, 2013; Silva, 2015 and Tawfik, 2017). That said, it is clear that there is a need for prevention and

control of these diseases, with a view to promoting better working conditions, namely: for the professional, who produces the care and can suffer consequences of his/her labor action, and for the subject, who receives the care. Considering that the identification of aspects related to mental health - and its imbalance - among nursing workers, including those working in the Neonatal Intensive Care Unit (NICU), can be a rational way of favoring decision-making in order to provide better working conditions, it was questioned: The prevalence of anxiety and depression symptoms among the nursing team of a Brazilian NICU; and, what factors are related to the presence of these mental states? Therefore, it was aimed to verify the anxiety and depression and related factors among nursing professionals of a Brazilian NICU.

MATERIALS AND METHODS

A descriptive, cross-sectional and quantitative study developed at the NICU of a public university hospital in Paraná, Brazil, with an operational capacity of 210 active beds exclusively to the Brazilian Unified Health System. In turn, the NICU has 10 beds to care for newborns. The unit's nursing service consisted of 31 professionals, six nurses, including one manager and 24 nursing technicians. The research involved all professionals of the nursing team of upper and middle level who worked - independent of shift - for at least six months in the NICU of the hospital and who agreed to voluntarily participate in the investigation by signing the Informed Consent Form. Those who were not in the unit at the time of data collection were excluded, either because they were on vacation, in day off, licence, and/or for any other reason. Thus, the total number of participants was determined considering the inclusion and exclusion criteria, in order to reach a sense of the eligible population. Data collection took place between July and September 2015, through face-to-face, individual interview, in a reserved room available in the hospital unit. In this moment, two instruments of data collection were applied to each of the participants, namely: a form for sociodemographic and occupational characterization of the sample, and the Brazilian version validated of the Hospital Anxiety and Depression Scale (HADS) (Zigmong, 1983 and Botega, 1998) to measure the symptoms of anxiety and depression in workers. The instrument for characterizing the sample included the recording of the following variables: sex; age; marital status; if had sons; profession; wage income; work shift; perform overtime. It is worth pointing out, that the sociodemographic and occupational characterization instrument was subjected to validation, as to its appearance, by five judges, all with experience in the area of neonatal intensive care and in the validation of study instruments.

The HADS is composed of 14 items that constitute two subscales, with seven items referring to anxiety (subscale HADS-A) and the other seven to depression (subscale HADS-D). Each item answered is graded in scalar scores ranging from zero to three. Each subscale HADS can present up to 21 points. For the interpretation of HADS, it is considered that the higher the individual's score, the greater their possibility of presenting signs of anxiety and/or depression. In addition, the cutoff value of eight can be used to determine the existence (or not) of symptoms relating to mental states of anxiety and depression in the individuals assessed (Zigmong, 1983 and Botega, 1998). The data collected were compiled into spreadsheets of Microsoft Office Excel[®] software, version

2010. After tabulation, the data were exported to the Statistical Package for Social Sciences (SPSS[®]), version 21.0, to perform the descriptive and inferential statistical analysis. All variables were submitted to descriptive analysis, using measures of central tendency, dispersion, amplitude and proportion in percentage, depending on the nature of the analyzed variable. In order to verify the relation between the points obtained in the subscale HADS-A and the HADS-D subscale points, was performed the Spearman correlation test. Fisher's exact test was applied to test the association between the personal aspects (age, marital status, sons and labor (occupation, wage income, work shift, performs overtime) of the participants with the presence of anxiety and depression. For all inferential analyzes, statistical significance was defined as 5%, expressed as p-value. The study complied with all ethical requirements applicable to research involving human subjects, being submitted and approved by the Research Ethics Committee of the institution to which the researchers are linked, and a favorable opinion was issued for its development under number 1.134 633/2015 and Certificate of Ethics Appreciation for Presentation No. 43513615.7.0000.0107.

RESULTS

Of the total (n= 31) of professionals in the NICU nursing team, four (12.9%) were classified as ineligible for participation in this study, one because they were on special licence, one was on vacation and two were away from work by medical attestation. Of the 27 eligible professionals, one refused to participate in research. In this way, the final sample included 26 (83.9% of the total) professionals. All 26 participants were female, with a mean age of 41 years, of which 18 (69.2%) were between 29 and 45 years old, and eight (30.8%) were older than 45 years. Regarding marital status, 16 (61.5%) were married; Four (15.4%) single, four (15.4%) separated and two (7.7%) widows. Only four (15.4%) participants had no son. As to the work activity, 11 (42.3%) were contracted as nursing techniques, nine (34.6%) auxiliaries and six (23.1%) nurses. With regard to wage income, 11 (42.31%) received up to eight minimum wages and, 15 (57.7%) received more than eight minimum wages. About the work shift, 16 (61.5%) professionals developed their activities at night, five (19.2%) during the morning and another five (19.2%) in the afternoon. Of the total number of participants, 21 (80.8%) affirmed that performed overtime. Concerning anxiety and depression, 13 (50%) professionals presented symptoms of anxiety and seven (26.9%) of depression, and the average points presented by participants in the anxiety subscale (8.4) were higher than the mean depression subscale score (4.9). Despite this, the amplitude of the points of the two subscales was similar (Table 1). It was verified that the total points obtained by the participants in the anxiety subscale presented a direct and statistically significant correlation (correlation degree (r)= 0.65; p-value <0.001) with the subscale depression points. Table 2 shows that, none of the personal aspects had a statistically significant association with the presence of anxiety and depression.

However, among those that signaled these disorders, the majority were between 29 and 45 years of age, were not married and had sons. In the same way, Table 3 shows that there was no statistically significant association between the labor aspects evaluated and the presence of anxiety and depression (Table 3).

Table 1. HADS scores and presence of anxiety and depression symptoms, according to each subscale. Cascavel, PR, Brazil, 2015

HADS (subscales)	Scores			Presence of symptoms	
	Mean (S.D.)*	Medium	Amplitude	Yes (score ≥ 8)	No (score <8)
Anxiety	8.4 (4.0)	8.0	1 – 16	13 (50.0)	13 (50.0)
Depression	4.9 (4.0)	3.0	0 – 15	07 (26.9)	19 (73.0)

*S.D.= Standard Deviation.

Table 2. Association between personal aspects and signs of anxiety and depression. Cascavel, PR, Brasil, 2015

Variables	Anxiety			Depression		
	Yes N (%)	No N (%)	P	Yes N (%)	No N (%)	P
Age (years)						
29 – 45	9 (69.2%)	9 (69.2%)	1	4 (57.1%)	14 (73.7%)	0.635
> 45	4 (30.8%)	4 (30.8%)		3 (42.9%)	5 (26.3%)	
Marital status (married)						
Yes	6 (46.2%)	10 (76.9%)	0.226	3 (42.9%)	13 (68.4%)	0.369
No	7 (53.8%)	3 (23.1%)		4 (57.1%)	6 (31.6%)	
Sons						
Yes	10 (76.9%)	12 (92.3%)	0.593	6 (85.7%)	16 (84.2%)	1
No	3 (23.1%)	1 (7.7%)		1 (14.3%)	3 (15.8%)	

Table 3. Association between the labor aspects of the participants and the signaling of anxiety and depression. Cascavel, PR, Brazil, 2015

Variables	Anxiety			Depression		
	Yes N (%)	No N (%)	P	Yes N (%)	No N (%)	P
Profession (Nurse)						
Yes	4 (30.8%)	2 (15.4%)	0.644	0 (0.0%)	6 (32.6%)	0.145
No	9 (69.2%)	11 (84.6%)		7 (100%)	13 (68.4%)	
Remuneration*						
≤ 8	4 (30.8%)	6 (46.2%)	0.688	3 (42.9%)	7 (36.8%)	1
> 8	9 (69.2%)	7 (53.8%)		4 (57.1%)	12 (63.2%)	
Work shift						
Morning	4 (30.8%)	1 (7.7%)	0.096	2 (28.6%)	3 (15.8%)	0.834
Afternoon	4 (30.8%)	1 (7.7%)		1 (14.3%)	4 (21.0%)	
Night	5 (38.4%)	11 (84.6%)		4 (57.1%)	12 (63.2%)	
Performed overtime						
Yes	11 (84.6%)	10 (76.9%)	1	5 (71.4%)	16 (84.2%)	0.587
No	2 (15.4%)	3 (23.1%)		2 (28.6%)	3 (15.8%)	

*Result expressed in minimum salaries.

Still, the disorders occurred more frequently among technical professionals and/or nursing assistants, with remuneration higher than eight minimum wages, who worked at night and performed overtime.

DISCUSSION

After a survey by the Federal Nursing Council (COFEN), it was identified that the Brazilian nursing is constituted, mainly, by women, who perform technical and auxiliary activities and that has under the age of 45 (Machado, 2015). Thus, it was noted that - even though it was performed in a specific locality in the interior of Brazil - the characteristics of the participants in the present study were consonant with the national profile of the professional category, which reaffirms its well-defined profile. On the evaluation of anxiety and depression, the application of the HADS scale made it possible check that these mental states presented prevalence in accordance with the hypotheses initially mentioned, with anxiety symptoms being present in 50% of the participants and of depression in 26.9% (Table 1). In addition, the fact that anxiety cases presented a direct and significant correlation ($r=0.65$; $p\text{-value}<0.001$) with the presence of depressive symptoms indicates that anxiety is a factor that influences the occurrence of depression, many times, being the first indications. In this

direction, other Brazilian scholars ratify the relationship between anxiety and depression (Guerra, 2016).

The prevalence of mental states identified in this study was higher than that observed in research conducted with a nursing team in a surgical center, in which symptoms of anxiety and depression (also evaluated by the application of the HADS scale) were present in 31.3 % and 24.2% of professionals, respectively. In the subscale referring to anxiety, the average number of points of the NICU professionals was 8.4, while among the professionals of the surgical block was 6.3. In the subscale of depression, the surgical team obtained an average of 5.2 points, while the participants of this study had a mean of 4.9 points. Likewise, the amplitude of both subscales was also smaller among the professionals of this research, compared to that obtained by the study performed with the surgical center team (Schmidt, 2011). Although it is a possible inference, our results are interpreted to mean that the environment of intensive care in neonatology, critical and peculiar, can influence the labor tension and contribute to the anxiety among nursing workers. Differently from what was found in this study, in which the mental states presented high prevalence, the authors of the research carried out in five university hospitals in the metropolitan region of São Paulo describe that there was absence of anxiety and depression among the

nursing professionals investigated. However, it is worth noting that in that study, the assessment of mental states was performed by applying the Beck Anxiety Inventory (BAI) and Beck Depression Inventory (BDI), in addition to the State-Trait Anxiety Inventory (STAI) (Guerra, 2016) Regarding the associated factors, it was verified that all the personal aspects evaluated had relation with the mental states, if only the descriptive statistics presented in Table 2. The same table shows that the presence of anxiety symptoms, but not depression, was higher among women with up to 45 years. This may have been due to the fact that the largest number of participants (n= 18; 69.2%) was from professionals aged up to the mentioned limit.

However, the same can not be inferred from the relationship between marital status and mental states, since among the unmarried participants there was a higher prevalence of anxiety symptoms (53.8%) and depression (57.1%), although married professionals participated in the study in a larger number (n= 16; 61.5%). Already in a review study, it is pointed out that the prevalence of depressive symptoms is higher among nursing professionals with established marital relationship (Guerra, 2016). Of the 26 participants, 22 (84.6%) stated that they were mothers. Thus, it can be considered as already being expected that the symptoms of anxiety and depression also present more prevalent among women with children, this being the case. However, we should be careful with inferences about the association between personal aspects and the presence of anxiety and depression symptoms. In the first instance, because there were no statistically significant associations between the variables (Table 2). In addition, the personal aspects evaluated present a considerable potential for confusion, since the fact that women need to reconcile different social roles (women workers, mothers, wives, etc.), by itself, is already configured as contributing to the emergence of symptoms of stress, anxiety and depression (Rodrigues, 2016 and Spindola, 2000).

It should be emphasized that, in particular, nursing managers should be alert to any indication of these mental states and should not regard the presence of symptoms as normal and common, or which is part of the busy life that professionals face in the face of double or triple social function. Often these symptoms are the predictors of psychological fatigue and, if untreated, may be a determining factor for the occurrence of suicide among professionals (Guerra, 2016). On the labor aspects, it was identified that 69.2% (n= 9) of participants who presented anxiety symptoms and 100% (n= 7) of those with depressive symptoms were nursing technicians and/or auxiliaries. Thus, it is important that the nurse seeks strategies to prevent these mental states, since they contribute greatly to the increase of absenteeism rates in the members of the team (Dauok-Öyry, 2014; Alves, 2016 and Santana, 2016). Regarding the remuneration, in this study the presence of anxiety and depression symptoms was higher among professionals who received more than eight minimum salaries (Table 3). These results diverge from what is recorded in the literature, since other research indicates that it is the low wages that influence the presence of these mental states (Guerra, 2016 and Schmidt, 2011). Still on the labor aspects, Table 3 shows that the presence of symptoms of anxiety and depression was proportionally higher among professionals working at night and performed overtime. Night work is developed over a period of 12 hours and it is known that on many occasions the workday exceeds this workload, the

example of the delays of the staff that receives the shift, as well as - and above all - the accomplishment of overtime.

A survey of 70 nurses, workers at the NICU of a hospital in the state of Minas Gerais, evaluated the effect of the 12-hour shift on the states of mind and drowsiness of professionals. The results pointed out that this workday developed in a critical unit can affect both the quality of life of the professionals, influencing their physical and mental health, as well as being potentially dangerous to patients (Ferreira, 2013). In the same direction, a survey carried out in 44 hospitals in California, USA, showed that the extensive working time developed by nurses of NICUs also contributed negatively to the patient's safety, since the professional perception of excessive work was associated with the increase of infections related to health care (Tawfik, 2017). NICU work involves emotional exhaustion, personal performance collection, depersonalization, and difficult experiences (both physically and mentally) that therefore directly affect the degree of satisfaction and happiness with employment (Soroush, 2016 and Einarsdóttir, 2012) and favor the presence of symptoms of stress, anxiety and depression (Oliveira, 2013; Ferreira, 2017; Guerra, 2016; Cricco-Lizza, 2014; Gomes, 2013; Silva, 2015 and Tawfik, 2017). Because of these unfavorable aspects, it is important to note that good communication skills and interpersonal relationships, as well as collaborative posture, are among the main competences to be developed by the nurse of NICU and her team. In addition, the pursuit of professional development to perform advanced clinical care is also essential, but, being aware that always positive outcomes may not be a constant reality. In addition to these competences, personal interest per se by the Nursing profession (Soroush, 2016; Einarsdóttir, 2012 and Mirlashari, 2016)

Even in view of the importance of this research and its results for the health of nursing workers, it is recognized that it presents limitations, especially regarding the limited number of participants and the impossibility of generalizing their findings to other realities. Other studies, with a more robust number of participants, are also necessary to confirm (or not) if the personal and work aspects evaluated here are actually associated with the mental states in question, since in this research there was no statistically significant relation. In addition, it is equally important that investigations such as these be developed with nursing professionals working in other care contexts.

Conclusion

The symptoms of anxiety and depression presented a prevalence higher than that indicated by the literature, but, were in agreement with the hypotheses listed. There was no statistical association between the signaling of symptoms of mental states with the personal and work characteristics of the sample of professionals in the Brazilian NICU evaluated. The results can instrumentalize the nurse, especially in the militancy for the viability of strategies to promote the mental health of the worker in neonatal intensive care, which may have repercussions on the quality of the assistance produced and in the work environment itself.

Disclosure of Potential Conflicts of Interest

The authors declare that they have no conflicts of interests.

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