Anxiety and depression in mothers of newborns in intensive care units

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Ansiedade e depressão em mães de recém-nascidos internos em unidade de terapia intensiva

Ansiedad y depresión en madres de recién nacidos en unidades de cuidados intensivos

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ABSTRACT

Objective: To evaluate the classification and factors associated with anxiety and/or depression in mothers of newborns in a neonatal intensive care unit and elaborate the nursing process after psychological testing.

Method: A study conducted with 91 mothers of newborns in intensive care of northeastern maternity, through a Beck anxiety and depression characterization and inventory form.

Results: Majority with severe anxiety (93.4%) and moderate depression (50.5%). There was statistical significance between anxiety with planned pregnancy (p=0.022) and vaginal delivery route (p=0.028), as well as depression with abortion (p=0.027) and mechanical ventilation (p=0.017).

Conclusion: Route of delivery, unpaid occupation, income, kangaroo method adhering, supplementation, schooling, planned pregnancy, gestational age of birth and newborn weight impact emotional instability. Social support stands out as a protective factor for symptoms of anxiety and depression.

Keywords: Anxiety. Depression. Pregnant women. Nursing care. Intensive care units, neonatal.

RESUMO

Objetivo: Avaliar a classificação e fatores associados à ansiedade e/ou depressão em mães de recém-nascidos internos em unidade de terapia intensiva neonatal e elaborar o processo de enfermagem após teste psicológico.

Método: Pesquisa realizada com 91 mães de recém-nascidos internos em terapia intensiva de maternidade nordestina, por meio de formulário de caracterização e inventário de ansiedade e depressão de Beck.

Resultados: Maioria com ansiedade grave (93,4%) e depressão moderada (50,5%). Houve significância estatística entre ansiedade com gravidez planejada (p=0,022) e via de parto vaginal (p=0,028), bem como depressão com abortamento (p=0,027) e ventilação mecânica (p=0,017).

Conclusão: Via de parto, ocupação não remunerada, renda, adesão ao método canguru, suplementação, escolaridade, gravidez planejada, idade gestacional do nascimento e peso do neonato impactam na instabilidade emocional. O apoio social destaca-se como fator de proteção para sintomas de ansiedade e depressão.

Palavras-chave: Ansiedade. Depressão. Gestantes. Cuidados de enfermagem. Unidade de terapia intensiva neonatal.

RESUMEN

Objetivo: Evaluar la clasificación y los factores asociados a la ansiedad y/o depresión en madres de recién nacidos en una unidad de cuidados intensivos neonatales y elaborar el proceso de enfermería después de las pruebas psicológicas.

Método: Se realizó un estudio con 91 madres de recién nacidos en cuidados intensivos de maternidad nororiental, a través de un formulario de caracterización y un inventario de ansiedad y depresión de Beck.

Resultados: La mayoría con ansiedad severa (93,4%) y depresión moderada (50,5%). Hubo significación estadística entre la ansiedad con embarazo planificado (p=0,022) y la vía de parto vaginal (p=0,028), así como la depresión con aborto (p=0,027) y la ventilación mecánica (p=0,017).

Conclusión: La vía de parto, la ocupación no remunerada, los ingresos, la adhesión al método canguro, la suplementación, la escolarización, el embarazo planificado, la edad gestacional del nacimiento y el peso del recién nacido afectan la inestabilidad emocional. El apoyo social se destaca como factor protector de los síntomas de ansiedad y depresión.

Palabras clave: Ansiedad. Depresión. Mujeres embarazadas. Atención de enfermería. Unidad de cuidado intensivo neonatal.

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INTRODUCTION

Anxiety and depression are emotional problems that intersect and each has its peculiarity. Anxiety is seen as a normal reaction of the body to a danger zone, becoming a disorder according to its intensity and frequency, which can affect work, well-being and personal relationships. In the case of depression, the enduring feeling is accompanied by the constant presence of negative thoughts, guilt, fear and decreased pleasure for daily activity, requiring psychological and psychiatric help[1].

Biological and environmental factors can trigger anxiety and/or depression in the puerpery. In this context, the Neonatal Intensive Care Unit, as an area of care for vulnerable newborns who need specific and continuous care, can be an element that triggers emotional distress[2].

Nevertheless, the hospital stay allows the newborn greater exposure to the procedures necessary for survival, which may decrease contact with the mother who may encounter psychic suffering in the face of the possibility of infant morbidity and mortality. For this, 46% of infant deaths occur in the first 28 days of life. Prospective trends show that 60 million children under five years of age will die between 2017 and 2030, half of them newborn[3]. In 2016 in Brazil, according to the second most updated report, the neonatal mortality rate was 14 per 1,000 live births (14/1,000 LB)[4]. In Paraíba, in that same year, the neonatal mortality rate was 8.47 per 1,000 live births (8.47/1,000 LB)[5].

In order to ensure health coverage and increased survival of newborns, health services need to offer adequate strategies for satisfactory care of children and their families after delivery[6]. From this perspective, the separation of the mother-child caused by the hospitalization of the child in a neonatal intensive care unit is one of the greatest difficulties of health services, because this experience can be traumatic of the mother and exert negative influence on the interactive mother-child behavior, triggering emotional problems, such as anxiety and depression in mothers and cognitive delays in the newborn[1].

In this perspective, the Systematization of Nursing Care (SNC) is a care tool provided within health services, in an individualized, humanized and responsible way, which allows identifying and intervening in emotional problems, such as anxiety and depression in mothers of newborns hospitalized in an intensive care unit[7].

Thus, considering the panorama of anxiety, depression and neonatal hospitalizations at the national and global level, the importance of the intensive care unit to increase the survival of newborns, the impact brought to the mothers of internal children, and finally, indicating nursing care as a relevant element to the care of individuals in various sectors, this research has the following fundamental questions: Do mothers of newborns have anxiety and/or depression resulting from the process of hospitalization of their children in an intensive care unit? What are the nursing diagnoses and possible interventions aimed at mothers after applying psychological tests? The aim of this study was to evaluate the classification and factors associated with anxiety and/or depression in mothers of newborns in a neonatal intensive care unit and to elaborate the nursing process after psychological testing.

METHOD

Descriptive cross-sectional study and quantitative approach carried out in the neonatal intensive care sector of the *Instituto Cândida Vargas* (ICV), a reference maternity care in the care of pregnant women, puerperal women and high-risk newborns and the *Hospital Amigo da Criança no Estado* (IHAC) Initiative, located in the city of João Pessoa, Paraíba, Brazil.

The target population was composed of 91 mothers according to the following inclusion criteria: mothers with newborns hospitalized in intensive care units during the period in which the research took place, with age of majority, regardless of parity and schooling. The sample was calculated by means of simple random sampling (SRS) for finite sample, with an annual population of 230 mothers with their children interned in the intensive care unit in this maternity unit[8]. The confidence level was 95%, with a margin of error of 5%, i.e., $\alpha = 0.05$ (z = 1.96), p=0.08 and predicted losses of 0.2. The probabilistic sample was calculated in 91 mothers of the ICV.

For the purpose of elucidating the calculation, p is the proportion of the study's outcome variable. For unknown proportions, the value of 50% is admitted, i.e., 0.5. A margin of error between 5% and 10% is usually used. Over the z, it means the percentile that reflects the degree of reliability over the maximum error. For the health area, $\alpha = 0.05$. This results in z = 1.96. The proportion (p) for the sample calculation in this study considered the average estimate of hospitalizations equivalent to 8.26% (0.08). The expected losses are equivalent to those that would give up after data collection, which is important for reliable maintenance of the sample.

The form was composed of sociodemographic data, life habits, sexual, reproductive characteristics and questions related to the newborn, in addition to Beck's Depression Inventory (BDI) and Anxiety Inventory (AI), which are instruments with the use of scales (BAI). Beck's BDI contains 21 multiple choice items, the intensity of which ranges from 0 to 3, referred to sadness, pessimism, feeling of punishment,

self-accusation, thought of suicide, crying crises, irritability, social retraction, low income for work, indecision, body image distortion, sleep disorder, fatigue, appetite loss, weight loss, somatic concern , restriction of libido. The classification has the following cutoff points: ≤ 10 (without depression or minimal depression), 10-18 (mild to moderate depression), 18-29 (moderate to severe depression), 30-63 (severe depression). It recommends a score above 15 to identify dysphoria and conclude that the term "depression" should be used for subjects with a score above 20 with diagnosis[9].

The anxiety inventory (BAI) consists of 21 items, which should be evaluated by the individuals themselves on a four-point scale, namely: 0 (absolutely not), 1 (slightly anxious), 2 (moderately anxious), 3 (severely anxious). The duration of application is about five to ten minutes. Being classified the following cutoff points, 0-10 (minimum symptoms), 11-19 (mild symptoms), 20-30 (moderate symptoms), 31-63 (severe symptoms)[9].

The research took place in the morning and sunday shifts during march and April 2020. In this study, we opted for an individual interview for participants with any level of education, so the instrument was adapted to a form. After prior authorization from the ICV responsible sector and assent of the Ethics and Research Committee, data were collected by a nurse at the hospital on daily duty. The interview was conducted in a suitable and comfortable room, ensuring the confidentiality and confidentiality of the mothers, according to the days and times pre-established. The collection occurred with each mother at a single moment.

Data analysis was performed with the help of the IBM Statistics Package for the Social Sciences (SPSS), version 21. The results were presented in tables containing absolute, relative frequency and the picture with the nursing process. The data were associated with the Chi-Square test when the expected frequency was greater than five in the cells and the Fisher's Exact Test, when the expected frequency was less than five, with statistical significance for ≤ 0.05 results.

To verify probability of the phenomenon, the Odds Ratio, i.e., Odds Ratio (OR). The ratio of chance and confidence interval indicates the chance or protection determined by the variables (significant values do not permeate the nullity symbolized by the number 1). When the value is greater than 1, the reading presents with the amount of times of this value occurs with a chance of outcome. In case the value is less than 1, there are two forms of reading for this protection factor, namely: a) the value revealed as a percentage for the highest chance of not presenting (non-occurrence of the outcome); b) the revealed value subtracted from number 1, indicating a lower chance in the percentage of occurrence of the outcome. In this study, the second statement for reading was used for the protection factor.

For the construction of the Nursing Process, Nursing Diagnoses (ND) were formulated from BAI and BDI, whose symptoms emerged as defining characteristics. To select the clinical manifestations of the instruments, it was established that symptoms whose women referred to the "zero" point would be excluded, that is, absolutely not.

Therefore, as the nursing process in this sample was elaborated collectively, if at least one respondent cited absence of that symptom, it would no longer be a defining characteristic, because it would not apply to all. The Nursing Diagnoses were elaborated with the help of the Portuguese version of the International Classification for Nursing Practice – ICNP®[10], using the elements of focus and judgment, and were ascertained as to their description to maintain the coherence of the symptom explained in BAI and BDI. The planning and interventions were elaborated according to the logical reasoning in relation to the symptoms (defining characteristics) evidenced.

The present study respected the ethical aspects related to research with human beings, as well as the signing of the Free and Informed Consent Form. The project was approved under protocol n. 208/2020, according to CAAE n.28313620.4.0000.5179.

■ RESULTS

The mean age of the mothers was 23.33 years (SD±4,240). Regarding the age group, there were 64 (70%) women between 18-25 years and 27 (28%) ≥ 26 years old. On schooling, 10 (11%) had elementary school I, 33 (36%) fundamental II, 45 (49%) high school and 3 (3%) being higher education. About occupation, 19 (21%) were students, 27 (30%) autonomous and 31 (34%) unemployed.

Regarding naturalness, 69 (76%) reside in the city of research and 22 (24%) in other cities. About religion, 45 (49%) were Catholic, 28 (31%) evangelicals and 18 (20%) had other religions not explained. As for ethnicity, 36 (38%) were white, 9 (10%) black, 23 (25%) browns and 11 (12%) Asian. Finally, monthly income, 85 (93%) with a minimum wage, 6 (6%) with more than one minimum wage.

On sexual, reproductive and obstetric characteristics, the mean sexarche age was 15.18 years (SD±1.841), with 19 (21%) women with sexarche up to 13 years and 72 (79%) ≥ 14 years old. In marital status, 60 (66%) lived with partners and 31 (35%) without partner. As for contraceptive methods, 57 (63%) condoms, 27 (28%) took the pill and 3 (3%) used the injectable hormonal contraceptive.

Regarding parity, 36 (39%) were primiparous and 55 (60%) multigestas, 79 (86%) never aborted and 12 (13%) have been aborted. The type of delivery elicited by 48 (52%) mothers was caesarean section surgery and 43 (47%) were vaginal. About children, 36 (39%) had only one child, 55 (60%) more than two children. Regarding prenatal care visits, 55 (60%) conducted 1 to 5 consultations and 36 (39%) held more than six consultations.

Regarding life habits, of the 91 mothers participating in the study, 75 (82.4%) were not smokers, and 52 (57.1%) non-etilist. Regarding leisure, 70 (76.9%) recreational activities once a month and 21 (23.1%) two or three times a month.

Regarding the average weight of the newborn, the mean was 2,692g (SD±349.9), with 27 (29%) less than 2,500g and 64 (70%) greater than 2,500g. About gestational weeks, 28 (30%) were 36 weeks and 63 (69%) more than 37 weeks. Regarding the practice of the kangaroo method, 69 (75%) used and 22 (24%) not. About newborns in supplementation, 57 (62%) supplementation and 34 (37%) not used. Regarding the bed bank, 65 (71%) made use of the stock and 26 (28%) No. Mechanical ventilation was required for 33 (36%) and 58 (63%) not used.

The mean sum of the classifications for anxiety was 35.91 (SD±4.518) and depression was 30.00 (SD±3.269). Regarding the classifications, all women fit into some degree of mental illness. On the prevalence of anxiety symptoms, 85 (93%) were severe and six (6%) had moderate symptoms. As for depression, 46 (50%) had moderate symptoms and 45 (49%) had severe symptoms.

According to Table 1, the association between sociodemographic, obstetric and life habits with anxiety, through fisher's exact test, presented statistical significance, with planned pregnancy (p=0.022) and vaginal delivery (p=0.028). Mothers with cesarean section have 12% (OR=0.875 [CI=0.786-0.974]) less likely to have severe anxiety compared to women with vaginal delivery. Women

with planned pregnancy are 10% more likely to have severe anxiety (OR=10.179 [CI=1.134-91,327]).

Women with unpaid occupation (OR=0.893 [CI=0.815-0.978]), higher income (0.929 [0.877-0.985], not adept at the kangaroo method (OR=0.913 [CI=0.849-0.982]) and that their babies did not use supplementation (OR=0.895 CI=0.819-0.978]) had 10%, 7%, 8% and 10% less chance of having severe anxiety, constituting protective factors. In addition, women with higher schooling (OR=1.080 [CI=1.015-1.149]), those who had their babies at ≥ 37 weeks of gestation (OR=1.105 [CI=1.020 -1,197]), whose babies had birth weight >2,500g (OR=1.103 [1.020-1.1194]) are more likely to have severe anxiety (Table 1).

There was statistical significance between the presence of depressive symptoms with abortion (p=0.027) and mechanical ventilation (p=0.017). It is noteworthy that the kangaroo method was close to significance (p=0.053). Women with children who used mechanical ventilation had 67.1% (OR=0.329 [CI=1.009-7.691]) less likely to have moderate depression compared to mothers whose children are not being ventilated (Table 2).

This investigation showed that women without abortion were 5.97 times more likely (OR=5.972 [CI=1.228-29,036]) to present symptoms of severe depression, as well as mothers adept to the kangaroo method were 2.78 times more likely (OR=2.786 [CI=1.009-7.691]) to present depressive symptoms at both levels. Absence of a partner was a protective factor for severe depression, in which women without a partner had 66% (OR=0.340 [CI=0.137-0.846]) less likely to have this outcome in relation to those with partnership (Table 2).On the manifestations common to all participants, according to BAI and BDI, table 3 shows the degrees of symptoms. It should be noted that the sum of the percentages should be carried out per line, because each manifestation was distributed according to the classification of anxiety and depression.

Chart 1 observes the nursing processes applied to these mothers according to each manifestation presented in the instrument used.

Table 1 – Odds ratio and association between anxiety with sociodemographic, obstetric variables and life habits. João Pessoa, Paraíba, Brazil, 2020. (n = 91)

Variable	ANXIETY				p*	OR (CI) †
	Moderate		Severe			
	f	%	f	%		
Occupation						
Paid	6	6.6	50	54.9	0.780	0.893
Not Paid	0	-	35	38.5		(0.815-0.978)
Religion						
Catholic	3	3.3	42	46.2	1.000	1.024
Non-Catholic	3	3.3	43	47.2		(0.195-5.362)
Education						
Up to Primary School	0	-	10	11	1.000	1.080
From High School	6	6.6	75	82.4		(1.015-1.149)
Age Group						
18-25 years	2	2.2	62	68.1	0.061	0.185
≥ 26 years	4	4.4	23	25.3		(0.032-1.082)
Color						
White	4	4.4	32	35.2	0.209	3.313
Not White	2	2.2	53	58.2		(0.547-19.123)
Income[*]						
Up to 1 MW	6	6.6	79	86.8	1.000	0.929
Over 2 MW	0	-	6	6.6		(0.877-0.985)
Smoker						
Yes	1	1.1	15	16.5	1.000	0.933
No	5	5.5	70	76.9		(0.102-8.579)

Table 1 – Cont.

Variable	ANXIETY				p*	OR (CI) †
	Moderate		Severe			
	f	%	f	%		
Acohol Consumer						
Yes	2	2.2	37	40.7	0.697	0.649
No	4	4.4	48	52.7		(0.113-3.735)
Leasure						
0-1 time in a month	5	5.5	65	71.4	1.000	1.538
2-3 times in a month	1	1.1	20	22		(0.170-13.951)
Marital Status						
With partner	5	5.5	55	60.4	0.429	2.727
Without partner	1	1.1	30	33		(0.304-24.433)
Planned Pregnancy						
No	5	5.5	28	30.8	0.022‡	10.179
Yes	1	1.1	57	62.6		(1.134-91.327)
Parity						
Primiparous	2	2.2	34	37.4	1.000	0.450
Multiparous	4	4.4	51	56		(0.130-4.324)
Abortion						
Yes	0	-	12	13.2	1.000	1.082
No	6	6.6	73	80.2		(1.016-1.153)
Delivery Route						
Cesarean Section	6	6.6	42	46.2	0.028‡	0.875
Vaginal	0	-	43	47.2		(0.786-0.974)
Number of children						
Only 1	1	1.1	35	38.5	0.397	0.286
≥2	5	5.5	50	54.9		(0.032-2.553)

Table 1 – Cont.

Variable	ANXIETY				p*	OR (CI) †
	Moderate		Severe			
	f	%	f	%		
Prenatal consultations						
1-5 consultations	2	2.2	53	58.2	0.209	0.302
≥ 6 consultations	4	4.4	32	35.2		(0.052-1.743)
Baby's weight						
<2.500g	0	-	27	29.7	0.174	1.103
>2.500g	6	6.6	58	63.7		(1.020-1.194)
Kangaroo Method						
Yes	6	6.6	63	69.2	0.329	0.913
No	0	-	22	24.2		(0.849-0.982)
Supplementation						
Yes	6	6.6	51	56	0.080	0.895
No	0	-	34	37.4		(0.819-0.978)
Milk Bank						
Yes	5	5.5	60	65.9	0.670	2.083
No	1	1.1	25	27.5		(0.232-18.748)
Mechanical ventilation						
Yes	1	1.1	32	35.2	0.411	0.331
No	5	5.5	53	58.2		(0.037-2.964)
Gestational age						
≤ 36 weeks	0	-	28	30.8	0.172	1.105
≥ 37 weeks	6	6.6	57	62.6		(1.020-1.197)

Source: Research data, 2020
*statistical significance; †OR: Odds Ratio/CI: Confidence Interval; ‡Fisher's Exact Test.

Table 2 – Odds ratio and association between depression with sociodemographic, obstetric variables and life habits. João Pessoa, Paraíba, Brazil, 2020. (n = 91)

Variables	DEPRESSION				p*	OR (CI) †
	Moderate		Severe			
	F	%	f	%		
Occupation						
Paid	31	34	25	27.5	0.246	1.653
Not Paid	15	16.5	20	22		(0.705-3.876)
Religion						
Catholic	26	28.6	19	20.9	0.173	1.779
Non-Catholic	20	22	26	28.5		(0.775-4.082)
Education						
Up to Primary School	5	5.5	5	5.5	1.000	0.976
From High School	41	45.1	40	44.1		(0.262-3.630)
Age Group						
18-25 years	33	36.3	31	34.1	0.821	1.146
≥ 26 years	13	14.3	14	15.3		(0.466-2.820)
Color						
White	50	54.9	10	12.1	0.749	1.163
Not White	23	25.3	7	7.7		(0.460-2.939)
Income[*]						
Up to 1 MW	41	45.1	44	48.4	0.203	0.186
Over 2 MW	5	5.5	1	1		(0.021-1.663)
Smoker						
Yes	9	9.9	7	7.6	0.784	1.320
No	37	40.7	38	41.8		(0.446-3.914)

Table 2 – Cont.

Variables	DEPRESSION				p*	OR (CI) †
	Moderate		Severe			
	F	%	f	%		
Acohol Consumer						
Yes	19	20.8	20	22	0.834	0.880
No	27	29.7	25	27.5		(0.383-2.019)
Leasure						
0-1 time in a month	38	41.8	32	35.2	0.221	1.930
2-3 times in a month	8	8.8	13	14.2		(0.711-5.237)
Marital Status						
With partner	25	27.5	35	38.4	0.383	0.340
Without partner	21	23.1	10	11		(0.137-0.846)
Planned Pregnancy						
No	14	15.3	19	21	0.280	0.599
Yes	32	35.1	26	28.5		(0.253-1.419)
Parity						
Primiparous	15	15.4	21	20.9	0.170	0.553
Multiparous	31	35.2	24	28.5		(0.236-1.294)
Abortion						
Yes	10	11	2	2.2	0.027‡	5.972
No	36	39.6	43	47.2		(1.228-29.036)
Delivery Route						
Cesarean Section	26	28.6	22	24.2	0.531	1.359
Vaginal	20	22	23	25.3		(0.595-3.103)
Number of children						
Only 1	16	17.6	20	22	0.395	0.667
≥2	30	33	25	27.4		(0.286-1.522)

Table 2 – Cont.

Variables	DEPRESSION				p*	OR (CI) †
	Moderate		Severe			
	F	%	f	%		
Prenatal consultations						
1-5 consultations	28	30.8	27	29.6	1.000	1.037
≥ 6 consultations	18	19.8	18	19.8		(0.448-2.403)
Baby's weight						
<2.500g	14	15.4	13	14.3	1.000	1.077
>2.500g	32	35.2	32	35.1		(0.375-2.685)
Kangaroo Method						
Yes	39	42.9	30	33	0.053‡	2.786
No	7	7.7	15	16.4		(1.009-7.691)
Supplementation						
Yes	28	30.8	29	31.9	0.829	0.858
No	18	19.7	16	17.6		(0.367-2.009)
Milk Bank						
Yes	29	31.9	36	39.6	0.104	0.426
No	17	18.8	9	9.9		(0.166-1.097)
Mechanical ventilation						
Yes	11	12.1	22	24.2	0.017‡	0.329
No	35	38.4	23	25.3		(0.134-0.804)
Gestational age						
≤ 36 weeks	14	15.4	14	15.4	1.000	0.969
≥ 37 weeks	32	35.2	31	34		(0.398-2.360)

Source: Research data, 2020
*statistical significance; †OR: Odds Ratio/CI: Confidence Interval; ‡Fisher's Exact Test.

Table 3 – Distribution of symptom degrees according to the items defined for the elaboration of the nursing process applied to mothers of internal newborns in intensive care unit. João Pessoa, Paraíba, Brazil, 2020. (n = 91)

Manifestations of Beck Anxiety Inventory			
Variables	Mild	Moderate	Severe
Tremors in the legs	14 (15.3%)	37 (40.7%)	40 (44.0%)
Unable to relax	40 (44.0%)	30 (33.0%)	21 (23.0%)
Heart palpitation or acceleration	45 (49.5%)	36 (39.5%)	10 (11.0%)
Difficulty to breath	49 (53.8%)	30 (33.0%)	12 (13.2%)
Scared	18 (19.8%)	46 (50.5%)	27 (29.7%)

Manifestations of Beck Anxiety Inventory			
Variables	Mild	Moderate	Severe
Sadness	49 (53.8%)	35 (38.5%)	7 (7.7%)
Discouragement	-	62 (68.1%)	29 (31.9%)
Failure	44 (48.4%)	33 (36.2%)	14 (15.4%)
Dissatisfaction	36 (39.6%)	33 (36.3%)	22 (24.1%)
Appetite	45 (49.4%)	37 (40.7%)	9 (9.9%)

Source: Research data, 2020.

Defining Characteristic	Nursing Diagnosis		Planning	Intervention
Manifestations	Focus	Judgement		
Tremors in the legs	Risk for body movement	Increased	Reduced negative consequences of tremors	*Guide to the possibility of trauma. * Assist in the care activities of the newborn. * Instruct on risk reduction posture. * Provide calm environment with minimal stressors.
Unable to relax	Sleep pattern	Altered	Relaxation Promotion	* Demonstrate relaxation techniques * Assist in creating a schedule of daily activities
Heart palpitation or acceleration	Risk of blood pressure	Altered	Maintenance of sensitive pressure and emotional state	* Help the patient recognize signs of increased or decreased blood pressure and anxiety. * Support the mother by listening to her needs. * Encourage to express her concerns.

Chart 1 – Nursing process applied to mothers of newborn inpatients in intensive care unit according to elicitly manifestations in Beck Anxiety and Depression Inventory. João Pessoa, Paraíba, Brazil, 2020

Defining Characteristic	Nursing Diagnosis		Planning	Intervention
Manifestations	Focus	Judgement		
Difficulty to breath	Risk of respiratory pattern	Altered	Improvement of respiratory pattern	* Guide on the technique for breathing exercises. * Monitor respiratory pattern. * Check for signs of agitation.
Scared	Risk of disorganized behavior	Increased	Reduction of fear	* Provide correct information using simple terms. * Encourage patients to verbalize any fear and concern. * Speak calmly and slowly * Provide tranquility and comfort. *Indicate psychotherapy.
Sadness	Risk for Depression	Increased	Reduction of sadness	* Stimulate dialogue * Encourage family visit * Provide distraction methods * Guide engagement in support groups.
Discouragement	Risk of hopelessness	Increased	Improvement of the mood	* Help women prioritize activities. * Identify and control factors that lead the woman to discouragement. * Keep the atmosphere receptive and welcoming.
Failure	Risk of frustration	Increased	Improvement of self-esteem	* Identify negative self-critical discourses * Score the evolution of the development of the newborn. * Praise the care and attention aimed at the child * Ask the woman to point out the best achievements of her life.
Dissatisfaction	Risk of negation capacity to manage life	Increased	Increased level of satisfaction for life	* Stimulate positive thinking. * Ensure psychological support by the health team. * Indicate support group of mothers of newborn inpatients as a strategy to promote acceptance of the situation.
Appetite	Food intake	Decreased	Improvement of food pattern	*Request nutritional guidance from the health service team. * Inform the patient about the importance of food intake for the breastfeeding of the newborn.

Chart 1 – Cont.
Source: Research data, 2020.

■ DISCUSSION

The sociodemographic profile of the women in this study was not related to anxiety and depression, although important variables of risk and protection to emotional disorders were shown. A study conducted in a northeastern capital showed losses in the high mother-child relationship when associated with risk factors such as lower mother's schooling[11], strengthening the impact of this sociodemographic variable on repercussions on the binomial.

Low schooling, primiparity, insecurity in care and absence of health insurance may favor postpartum depression among Asian women[12]. In Amsterdam, anxiety and depression presented risk factors associated with occupation in agriculture and livestock, history of unplanned pregnancy and tobacco use[13].

In this investigation, marital status, abortion episode, kangaroo method adhering and mechanical ventilation aligned with emotional outcomes. It is noteworthy that there is evidence of an association between the hospitalization process and the mental health status of the family conducting anxiety[14]. In Florida, considerable prevalences of baby blues (puerperal dysphoria), followed by postpartum depression and anxiety disorder, indicate family support as an element of high impact to mental illness[15].

Studies indicate a decrease in the depression score among mothers who were adept at the kangaroo method[1,6,16], being associated with the effect of oxytocin release during physical contact of the method[17]. These results are discordant from the findings of this study and there are no qualitative explanations, although it is believed that this outcome is related to attachment, that is, mothers who perform the technique, may feel more powerless for the newborn's permanence in the hospital sector, generating a greater sense of sadness.

Prematurity did not statistically impact the result, but a North American investigation with 62 mothers of premature infants (gestational age <37 weeks) showed high levels of depression and anxiety, the latter being more prevalent in mothers of babies born before 32 gestational weeks, due to the marked amount of invasive procedures[18].

Regarding the clinical manifestations related to anxiety and depression, the report of couples of premature babies pointed out that feelings such as anguish, impotence, fear and desire to escape are part of the daily life of the family that has a child hospitalized in the NICU, with a significant relationship between these feelings and personal and socioeconomic factors[19].

Interventions focused on the mental health of mothers during the hospitalization of the child include interactions between the mothers of the group and execution of activities directed to the context (wheel of conversations and exchange of experiences experienced)[20]. In addition, the welcoming relationship, sensitive listening and care of the health team directed to mothers of babies in the NICU were strategies used to improve well-being in the face of the family's stay in the hospital[7].

■ CONCLUSION

There was mental illness with severe anxiety and moderate depression in most mothers of newborns in patients in a neonatal intensive care unit. Variables such as fixed partnership, planned pregnancy, vaginal delivery route, abortion, mechanical ventilation, adoption of the kangaroo method and supplementation are related to risk or protection to the emotional disorders studied, demonstrating the need to elaborate the nursing process in order to increase the resolution of this problem in health services at this level of complexity.

The study in only one reference maternity of the State, with the seal of *Hospital Amigo da Criança*, as well as the non-execution and evaluation of the interventions elaborated, constitute limitations of the research. The contributions are anchored in the effectiveness of the use of multidisciplinary scales of psychological evaluation, provided that there is a research team integrated with other areas, as well as its intersection with the systematization of care, conferring autonomy in nursing care.

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The authors declare that there is no conflict of interest.

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