REVISTA ONLINE DE PESQUISA

CUIDADO É FUNDAMENTAL

Universidade Federal do Estado do Rio de Janeiro • Escola de Enfermagem Alfredo Pinto

RESEARCH DOI: 10.9789/2175-531.2019.v11i2.270-277

Evaluation of Pain, Stress and Coping in Puerperal Women After Cesarean Section

Avaliação da dor, Estresse e Coping em Puérperas no Pós-Operatório de Cesárea

Evaluación del Dolor, el Estrés y Afrontamiento en las Madres en la Sección Cesárea Postoperatoria

Vania da Rosa Friedrich[1]; Monique Pereira Portella Guerreiro[2]; Eliane Raquel Rieth Benetti[3]; Joseila Sonego Gomes[4]; Rosane Maria Kirchner[5]; Eniva Miladi Fernandes Stumm[6]*

How to quote this article:
Friedrich VR, Guerreiro MPP, Benetti ER, *et al*. Evaluation of Pain, Stress and Coping in Puerperal Women After Cesarean Section. Rev Fund Care Online.2019.11(n. esp):270-277. DOI: http://dx.doi.org/10.9789/2175-5361.2019.v11i2.270-277

ABSTRACT

Objective: The study's purpose has ben to assess pain, perceived stress and coping in puerperal women during their cesarean postoperative periods. **Methods:** It is a cross-sectional study with a quantitative approach, which was carried out with 65 postpartum women admitted to a general hospital. The puerperal women during their cesarean postoperative period showing complaints and/or signs of pain in the last 24 hours were included. Data collection took place from April to July 2014 by using a Socio-demographic/Clinical Characterization Form, the McGill Pain Questionnaire, the Perceived Stress Scale, and an Inventory of Coping Strategies. Considering data analysis, Statistical analysis was performed. The project was approved by the Ethics and Research Committee from the *Universidade Regional do Nororeste do Estado do Rio Grande do Sul (UNIJUÍ), CAAE* No. 26726014.0.0000.5350. **Results:** 46.4% reported severe pain; 64.6% "nauseous" pain. Among the puerperal women, 83.1% were classified as medium stress, and Positive Reassessment was the most used coping factor. Conclusion: Through the surgical procedure the biopsychosocial health of the puerperal women can be compromised due to the presence of pain. Nevertheless, the use of coping strategies focused on the problem might favor the confrontation of the stressors in a positive way.

Descriptors: Pain, Psychological Stress, Psychological Adaptation, Women, Cesarean Section.

Article derived from the Course Conclusion Work entitled: Evaluation of pain, stress and coping in puerperal women after cesarean section, which was presented in 2015 to the Nursing Graduation Course from the *Universidade Regional do Nororeste do Estado do Rio Grande do Sul - UNIJUÍ.*

[1] Nurse, Specialist's Degree in Intensive Therapy by the *UNIJUÍ. Hospital Unimed Noroeste, Rio Grande do Sul*, Brazil.

[2] Nurse, MSc student enrolled in the Nursing Postgraduate Program at *UFSM. Universidade Federal de Santa Maria (UFSM)*, Brazil.

[3] Nurse, MSc in Nursing, PhD student enrolled in the Nursing Postgraduate Program at *UFSM. Universidade Federal de Santa Maria (UFSM)*, Brazil.

[4] Nurse, MSc in Nursing, PhD student enrolled in the Nursing Postgraduate Program at *UFSM*, Professor at *UNIJUÍ. Universidade Regional do Noroeste do Estado do Rio Grande do Sul (UNIJUÍ)*, Brazil.

[5] Mathematician, PhD in Electrical Engineering, Professor at *UFSM (Palmeira das Missões Campus)*. *Universidade Federal de Santa Maria (UFSM)*, Brazil.

[6] Nurse, PhD in Science - Nursing, Professor at *UNIJUÍ. Universidade Regional do Noroeste do Estado do Rio Grande do Sul (UNIJUÍ), Brazil* .

RESUMO

Objetivo: Avaliar dor, estresse percebido e coping em puérperas pós cesárea. **Métodos:** Estudo transversal, quantitativo, com 65 puérperas em um hospital geral. Foram incluídas puérperas no Pós Operatório de cesárea, com queixas e/ou sinais de dor nas últimas 24 horas. Coleta de dados de abril a julho de 2014, com Formulário de caracterização sociodemográfica/clínica, Questionário McGill de Dor, Escala de Estresse Percebido e Inventário de Estratégias de Coping. Foi realizada análise estatística. Projeto aprovado pelo Comitê de Ética e Pesquisa da *Unijuí, CAAE* nº 26726014.0.0000.5350. **Resultados:** 46,4% referiram dor severa; 64,6% dor "enjoada". Dentre as puérperas, 83,1% foram classificadas em médio estresse e, a Reavaliação Positiva foi o fator de coping mais utilizado. **Conclusão:** Pelo procedimento cirúrgico a saúde biopsicossocial da puérpera pode ficar comprometida pela presença da dor, entretanto a utilização de estratégias de coping focadas no problema pode favorecer o enfrentamento dos estressores de forma positiva. .

Descritores: Dor, Estresse Psicológico, Adaptação Psicológica, Mulheres, Cesárea.

RESUMEN

Objetivo: Cevaluar dolor, estrés percibido y afrontamiento en madres postoperatoria cesárea. **Métodos:** Estudio transversal, cuantitativo, con 65 madres en un hospital general. Fueron incluidas madres en post cesárea con quejas y/o signos de dolor en las últimas 24 horas. La recolección de datos, de abril a julio de 2014, con el McGill Pain Questionnaire, Formulario de caracterización sociodemográfica/clínica, Escala de estrés percibido y Inventario de Estrategias de adaptación. Se realizó análisis estadístico. Proyecto aprobado por Comité Ético de Investigación de UNIJUI, CAAE Nº 26726014.0.0000.5350. **Resultados:** 46.4% reportaron dolor severo; 64,6% dolor "enfermo". El 83,1% fueron clasificados como medio estrés y reevaluación positiva fue factor de afrontamiento más utilizado. **Conclusión:** En la cirugía, la salud biopsicosocial de mujeres después del parto puede verse comprometida por presencia de dolor, sin embargo, el uso de estrategias de afrontamiento centradas en el problema puede favorecer positivamente para hacer frente a los factores de estrés.

Descriptores: Dolor, El Estrés Psicológico, Adaptación Psicológica, Las Mujeres, Cesárea.

INTRODUCTION

Caesarean section is defined as the birth of the subject through an incision in the abdominal and uterine wall, and it is one of the most common abdominal surgeries in women.[1] Although it has benefits when properly indicated, it can increase mortality and morbidities such as bleeding, infection, pain, among others.[1] Among these complications, pain is considered an experience or sensation, which may be associated with either actual or potential subjective or personal injury to tissues, which has sensory, affective, autonomic and behavioral aspects,[2] in such a way that can compromise biopsychosocial health.

Frequently, puerperal women do not verbalize the stress and discomfort experienced in the postpartum period, and even the painful condition is little valued by the patients, relatives, and professionals who attend them, since the priority is attention to the newborn.[3] In this sense, the surgical procedure and the experience of pain can be evaluated by women undergoing cesarean delivery as stressful situations experienced in the puerperium period.

Stress is defined as any event that demands from either external or internal environment, which may exceed the adaptive capacity of an individual or social system.[4] Faced with a stressful situation, individuals perform an evaluation, define strategies of coping, and seek to respond to the stressor in order to soften or modify it. Thus, coping is a dynamic and modulating process, defined as a cognitive and behavioral change to handle specific external and/or internal demands, which are assessed as surplus to the resources of the individual, through evaluations and reevaluations of the person-environment relationship.[5]

In this sense, the object of study is the evaluation of pain, perceived stress and coping in puerperal women during their cesarean postoperative periods. This research is important in order to support reflections, discussions, and actions of health professionals, students and managers with a view to adjusting the care provided to the real needs of puerperal women. Because it is a priority area for the Health Ministry - safe maternity, with a edge for cesarean section - the originality of the study stands out when compared to those publicized on the subject, since it involves three constructs that can contribute to the restructuring of public policies attention to women's health.

Herein, faced with the knowledge gap related to this issue, the following question was used as guidance: What are the intensity and the pain type reported by puerperal women during their cesarean postoperative periods? What is the perceived intensity of stress and what coping strategies are used to deal with stressors? It is understood that the results obtained can be used in the restructuring of public policies for women's health care in order to qualify care, guarantee patient safety, know individual and clinical characteristics related to pain, stress and coping, reduce postoperative complications, and shorten the hospitalization period.

OBJECTIVE

Assessing pain, perceived stress and coping in puerperal women during their Cesarean Postoperative Periods (CPP).

METHODS

It is a cross-sectional study with a quantitative approach, which was carried out with 65 postpartum women admitted to the *Hospital de Caridade de Ijuí, Rio Grande do Sul.* Sampling was delimited for consecutive convenience, so where all puerperal women who entered the unit during the collection period were invited to participate in the study. The study included postpartum women in the CPP, who accepted to participate in the study, with complaints and/or signs of pain in the last 24 hours. Patients who

presented severe complications during the trans-operative period or immediate CPP (<24 hours), who presented difficulties in understanding the questions of the data collection instruments, were excluded.

Data collection took place from from April to July 2014 through a research protocol, comprised by the following: Socio-demographic/Clinical Characterization Form of the patients, McGill Pain Questionnaire (reduced form),[6] Perceived Stress Scale (PSS-10)[7] and Inventory of Coping Strategies (ICS) by Lazarus and Folkman.[8]

The characterization form was prepared by the researchers and the variables that were part of it were answered from the data collection in the women's records. The McGill Pain Questionnaire[6] is divided into Sensory Pain Estimate Index (PRI-S), Affective Pain Estimate Index (PRI-A), Present Pain Intensity (PPI), and Global Pain Experience Rating. The PRI-S consists of 11 descriptors of the sensory pain experience and the PRI-A by four descriptors of affective pain. Each descriptor has indicators related to pain intensity (0 = none, 1 = mild, 2 = moderate and 3 = intense). The PPI is composed of a Visual Analog Scale, demarcated from zero (0 = no pain) to ten (10 = worst pain imaginable). In the overall assessment, the patient chooses a word that indicates pain intensity (no pain, mild, uncomfortable, distressing, horrible and excruciating).

The Perceived Stress Scale[7] is composed of ten questions with five response options (0 = never, 1 = almost never, 2 = sometimes, 3 = almost always and 4 = always). The total score can vary from 0 to 40, being divided into 3-quantis for classification of stress level: from zero to 13 score - low stress level, from 14 to 27 score - medium stress level, and from 28 to 40 score - high stress level.

The ICS[8] is composed of eight factors (Confrontation, Seclusion, Self-control, Social Support, Responsibility Acceptance, Escape and Avoidance, Problem-Solving and Positive Reassessment) and 66 strategies with the following response options: 0 = I did not use this strategy, 1 = I used a little, 2 = I used a lot and 3 = I used a lot. For ICS analysis, strategies and higher average factors were considered the most used.

The collection was performed after explaining the objectives of the study, and signing the Free and Informed Consent Term by the puerperal women at times chosen by the participants. Socio-demographic and clinical data were collected directly from the patient's medical records, while the McGill Questionnaire, PSS-10 and ICS were applied by researchers and research assistants previously oriented for this task. In situations where the participant showed fatigue to respond to the instruments or had to attend to the newborn, it was planned to continue the collection at another time.

This study is part of the Interinstitutional Research Project "Evaluation of pain, stress and coping in patients and relatives in hospital environment". The research project was approved by the Ethics and Research Committee from the *Universidade Regional do Nororeste do Estado do Rio Grande do Sul - UNIJUÍ* (nº 554.936/2014), and all participants signed the Free and Informed Consent Term.

RESULTS AND DISCUSSION

Initially, 69 puerperal women were invited to participate of this study, of which four refused and 65 accepted to participate. The socio-demographic characteristics of the participants are presented in **Table 1**.

Table 1 – Socio-demographic characteristics of the puerperal women during their cesarean postoperative periods. Rio Grande do Sul, Brazil - 2014.

Variable	n	%
Age		
18 |--- 25 years old	19	29.2
25 |--- 32 years old	24	36.9
32 |--- 39 years old	19	29.2
39 years old or more	3	4.6
Average=Standard Deviation (Minimum; Maximum)	28.97=6.40 (18; 41)	
Marital status		
Common-law marriage	33	50.8
Married	20	30.8
Single	10	15.4
Divorced	2	3.1
Child(en)		
One	35	53.8
Two	17	26.2
More than Three	13	20
Schooling		
Incomplete Elementary School	15	23.1
Complete Elementary School	4	6.2
Incomplete High School	18	27.7
Complete High School	24	36.9
Graduation Degree	3	4.6
Postgraduation Degree	1	1.5

Source: Research Data.

Concerning the professed religion, 67.7% of the participants were Catholics, 24.6% Evangelicals, 1.5% Spiritists, 3.1% of another religion and 3.1% without a defined religion.

Regarding the clinical characteristics of the puerperal women, 46.2% were primiparous 27.7% two childbirths, 13.8% three childbirths and 12.3% multiparous. In relation to the number of previous childbirths, 12.3% had a vaginal delivery and 6.2% more than two vaginal deliveries; 23.1% underwent a cesarean section and 13.8% had two or more. The majority (81.1%) had not previously had an abortion. Considering the gestational age, 75.4% were on term, 21.5% preterm and 3.1% post-term.

With regards to the prenatal care, 98.5% of them performed it, and 78.5% were followed up by the *Sistema Único de Saúde (SUS)* [Unified Health System] and 20% by other agreements. Regarding the analgesia used for the treatment of CPP pain, the use of dipyrone (80.0%), ketoprofen (78.5%), morphine (52.3%), tramadol (33.8%), acetaminophen (12.3%), and diclofenac sodium (7.7%).

Concerning the breastfeeding, 87.7% of the interviewees had already started breastfeeding, and of these 27.7% had some difficulty in breastfeeding.

Table 2 shows the pain assessment scores of postpartum women in the postoperative period of cesarean section.

Table 2 – Pain intensity assessment of the puerperal women from an obstetric unit during their cesarean postoperative periods. Rio Grande do Sul, Brazil - 2014.

	Intensity	n	%
Assessment of the intensity of present pain	Painless	5	7.7
	Soft pain	6	9.2
	Moderate pain	24	36.9
	Severe pain	30	46.2
Overall assessment of pain experience	No pain	21	32.3
	Soft	8	12.3
	Uncomfortable	24	36.9
	Distressing	6	9.2
	Horrible	6	9.2
	Disturbing	0	0
Overall assessment of experienced pain intensity	Painless	5	7.7
	Soft pain	6	9.2
	Moderate pain	24	36.9
	Severe pain	30	46.2

Source: Research Data.

In **Table 3**, the descriptors of the McGill Pain Questionnaire are presented..

Table 3 – Descriptors of the McGill Pain Questionnaire from the puerperal women during their cesarean postoperative periods. *Rio Grande do Sul*, Brazil - 2014.

	Descriptor	n (%)	Mild n (%)	Moderate n (%)	Severe n (%)	Frequency of each escriptor
S	Throbbing	50 (76.9)	5 (7.7)	4 (6.2)	6 (9.2)	15 (23.1)
S	Shot	56 (86.2)	4 (6.2)	2 (3.1)	3 (4.6)	9 (13.8)
S	Stabed	4 9(75.4)	10 (15.4)	-	6 (9.2)	16 (24.6)
S	Acute	33 (50.8)	8 (12.3)	14 (21.5)	10 (15.4)	32 (49.2)
S	Colic	27 (41.5)	10(15.4)	18 (27.7)	10 (15.4)	38 (58.5)
S	Bite	50 (76.9)	5(7.7)	6 (9.2)	4 (6.2)	15 (23.1)
S	Heat-burning	36 (55.4)	8 (12.3)	9 (13.8)	12 (18.5)	29 (44.6)
S	Sore	24 (36.9)	11 (16.9)	15 (23.1)	15 (23.1)	41 (63.1)
	Massive	42 (64.6)	6 (9.2)	5 (7.7)	12 (18.5)	23 (35.4)
	Sensitive	24 (36.9)	22 (33.8)	6 (9.2)	13 (20.0)	41 (63.10)
	Breaking	41 (63.1)	4 (6.2)	11 (16.9)	9 (13.8)	24 (36.9)
A	Tiring	33 (50.8)	12 (18.5)	9 (13.8)	11 (16.9)	32 (49.2)
A	Nauseous	23 (35.4)	17 (26.2)	10 (15.4)	15 (23.1)	42 (64.6)
A	Frightened	49 (75.4)	5 (7.7)	3 (4.6)	8 (12.3)	16 (24.6)
A	Tormenting	54 (83.1)	4 (6.2)	1 (1.5)	6 (9.2)	11 (16.9)

Source: Research Data.
S: Sensitive Dimension; A: Affective Dimension

Regarding both pain characteristics and intensity, 23.1% of the puerperal women scored pain "sore" and "nauseous" as severe; 27.7% described the pain in "colic" as moderate and; 33.8% named "sensitive" pain as mild. When the frequencies of each descriptor were verified, "nauseous" pain had a higher frequency, followed by "painful" and "sensitive" pain and "colic" pain.

Subsequently, the descriptive measures of the Perceived Stress Scale are showed in **Table 4**.

Table 4 – Descriptive measures of the Perceived Stress Scale (PSS-10) from the puerperal women during their cesarean postoperative periods. *Rio Grande do Sul*, Brazil - 2014.

Frequency (last 30 days)	Average	Standard Deviation	Frequency
She was annoyed by something that happened unexpectedly.	1.54	1.47	Almost never/sometimes
She felt that she was unable to control important things in her life.	1.2	1.36	Almost never/sometimes
She has been nervous or stressed	2.63	1.41	Sometimes/uncommon
She was confident in hers ability to deal with hers personal problems.	1.37	1.29	Almost never/sometimes
She felt things happen the way she expected.	1.6	1.17	Almost never/sometimes
She thought he could not handle all the things she had to do.	1.86	1.42	Almost never/sometimes
She was able to control irritations in her life.	1.95	1.35	Almost never/sometimes
She felt that every aspect of her life was under control.	1.66	1.38	Almost never/sometimes
She was angry because of things that were beyond her control.	2.34	1.57	Sometimes/uncommon
She felt that the problems had accumulated so much that you could not solve them.	1.42	1.52	Almost never/sometimes

Scores: 0 = never, 1 = almost never, 2 = sometimes, 3 = almost always and 4 = always.

Considering the evaluation of the stress perceived by the PSS-10, Cronbach's alpha was 0.831 and shows satisfactory internal consistency for this population. Regarding the intensity of stress, 7.7% of the puerperal women were classified as low stress, 83.1% in medium and stress and 9.2% in high stress.

Table 5 presents the descriptive measures of the ICS, which obtained a Cronbach's alpha of 0.919, a value that confirms a satisfactory instrument internal consistency.

Table 5 – Descriptive measures of the Inventory of Coping Strategies from the puerperal women during their cesarean postoperative periods. *Rio Grande do Sul*, Brazil - 2014.

Factor	Average±SD	Highest Average Item (average±SD)	Lowest Average Item (average±SD)
1	1.37 ±0.33	I knew what I should have done, so I doubled my efforts to do what was necessary (1.89±1.09).	I made an action plan and followed it (1.28±1.06).
2	1.35±0.45	I tried to find the good side of the situation (1.98±1.02).	I did as if nothing had happened (0.89±1.03).
3	1.46±0.37	I thought of a person I admire and how it would solve the situation and took it as a model (1.97±1.06).	I did not let the others know of the true situation (1.02±1.02).
4	1.73±0.50	I accepted people's sympathy and understanding (2.17±0.84).	I sought professional help (0.78±1.17).
5	1.48±0.47	I promised myself things will be different next time (2.15±0.95).	I understood that the problem was caused by me (1.12±1.09).
6	1.17±0.49	I wished that the situation would end or that it would somehow disappear (2.14±1.01).	I have put my anger at another person(s) (0.65±0.90).
7	1.62±0.25	I knew what I should have done, so I doubled my efforts to do what was necessary (1.89±1.09).	I made an action plan and followed it (1.28±1.06).
8	1.85±0.53	I rediscovered what is important in life (2.29±0.93).	I found new beliefs (0.94±1.17).

Source: Research Data.
SD: Standard Deviation

1 - Confrontation; 2 - Seclusion; 3 - Self-control; 4 - Social Support; 5 - Responsibility Acceptance; 6 - Escape and Avoidance; 7- Problem-Solving; 8 - Positive Reassessment

It was verified that the positive reassessment factor was the one that presented the highest mean, thus the most used by the puerperae. Of the items that integrate this factor, the strategy "rediscover what is important in life" was the most used. In contrast, the Escape and Avoidance factor was the least used, and the strategy "put my anger at another person(s)", which integrates this factor, the least used.

A total of 65 postpartum women within an age group from 18 to 46 years old (average of 28.97 years old) have participated of this study. Similar results were found in a study that measured and characterized pain after cesarean section and verified its relation with the limitation of activities of 60 women with an average age of 26.3 years old and ranging from 18 to 44 years old.[9] Observing the participants, 66.1% were in the age group from 18 to 32 years old and 46.2% were primiparous. In a study that identified the prevalence, intensity and therapeutic measures of relief of perineal pain after vaginal delivery, 80.5% of the women were under 30 years old and 51.8% were multiparous,[10] results also similar to those found in the present study.

Regarding the mode of delivery, 72.3% stated that they did not choose the surgical delivery. In this sense, it is considered that several biological conditions of the pregnant women contraindicate the vaginal delivery, among them the interactivity, acute fetal distress, failure in the progression of labor, pelvic presentation, fetal macrosomia, imminent uterine rupture, vasa previa, placenta accreta, maternal infections, genital herpes, hepatitis and umbilical cord prolapse.[9,11] Nonetheless, in this study the reasons that led to the definition of the type of delivery were not identified, since this information was not informed in the records. In this perspective, a study that analyzed the factors associated with cesarean section found that cesarean rates were higher among women over 30 years old.[12]

With regards to cesarean postoperative pain, it is most often acute, has a sudden onset with a predictable outcome, and is closely related to tissue damage due to the inflammatory reactions resulting from a traumatic process that produces pain.[13] Considering the pain evaluation, when asked about the PPI, through the Visual Analogue Scale 46.2% indicated severe pain, 36.9% moderate pain, 9.2% mild pain and 7.7% without pain. In a study that used the Visual Analog Scale for data collection, 51.7% of the participants reported pain as moderate, followed by strong (20%), weak (18.3%) and intolerable (10%). It was observed that different terms were used to classify the intensity of pain by the authors, however, they translate results that can be compared to those that are being discussed.

In a similar study, which assessed cesarean postoperative pain through the McGill pain questionnaire, 93.3% of the participants had pain ranging from moderate to severe pain.[13] The results of this study demonstrated that 6.7% of the puerperal women classified the pain at the time of greatest intensity as uncomfortable, 28.3% as distressing, 37.5% as horrible and 27.5% as the worst possible pain.[13] In this regard, related to the overall evaluation of pain experience, the mothers of the present study considered the pain at the time of greatest intensity in uncomfortable 36.9%, mild 12.3%, distressing 9.2%, horrible 9.2% and 32.3% did not classify the pain in these criteria and none puerperal women considered the pain as disturbing (worst possible pain).

It is considered that these variations in the perception of pain intensity are expected, since pain is a subjective experience and can change from one woman to another. In this aspect, the importance of including pain measurement scales in the systematization of nursing care is highlighted, in order to individualize care according to the needs of each puerperal woman. Given this scenario, the need for early multidisciplinary interventions directed to women's health and, especially, the relief of pain during the puerperium is confirmed.[14]

Furthermore, in the same study that used the McGill questionnaire, 70% of the interviewees cited the descriptors that relate to PRI Sensitivo, the highest score being the pain in "pinching", while in PRI Affective, 70.8%, characterize the "nauseous" pain.[13] In the present study, similar results were found: 64.6% scored "nauseous" pain with higher score and 63.1% "painful and sensitive" pain, respectively.

Pain management in the postoperative period from a cesarean section differs slightly from other surgeries, mainly because the puerpera needs a quick recovery to take care of the newborn. Thus, drugs and techniques that do not alter the capacity of ambulation and consciousness are chosen. Moreover, the drugs used for treatment or prevention of pain can reach the newborn through breastfeeding.[15] Therefore, it is important to note that postoperative pain deserves attention from the team that attends the puerperal women, because after the physiological challenge many women will experience pain. The goal of practitioners is to use appropriate pharmacological methods and non-pharmacological comfort measures to successfully relieve pain while allowing the puerpera to stay awake and in a position to care for the newborn.[16]

Concerning the perceived stress, 83.1% of postpartum women were classified as medium stress, a result that deserves attention from health professionals, especially nurses. It is known that there are a variety of circumstances that can be perceived as stressors, such as situations of sadness, distress, tension, anxiety, lack of hope, just as a single and excessive factor may be responsible for this reaction. In this sense, it is considered that the prenatal period, the time of birth, the birth, the adaptation of the mother-baby binomial, as well as the CPP pain can be evaluated by the puerperal women as stressors. The study points out that especially primiparous

mothers may feel stressed by the changes and demands that childbirth imposes since they need to adapt to the new role.[17]

Regarding the evaluation of perceived stress, it is highlighted that the items of the PSS-10 that had the highest frequency were "have been nervous or stressed" (2.63±53.58) and "have been angry because of things that were out of their control" (2.34±67.31). In a study that investigated the occurrence and control of stress in 30 sedentary and physically active pregnant women, it was verified that the majority, 93% had high levels of stress from sources intrinsic and extrinsic to gestation.[18] An investigation that compared the phases of stress of primiparous in the third trimester of gestation and postpartum and correlated with the occurrence of postpartum depression, found that in both gestation and puerperium period, 63% of the women presented signs suggestive of stress. Nonetheless, the frequency of the manifestation of stress symptoms during pregnancy was higher than the frequency presented during the puerperium.

As the scale requests the frequency of the last 30 days, the stress perceived by the puerperal women can be related to the pregnancy and the expectation of the birth. This is because the gestational period can be considered a specific state of emotional stress and be perceived by women as a stressor because it involves intense changes from a physical, psychological and social viewpoints.[20] The constantly changing body, emotional instability, the fear and anxiety caused by childbirth, the transition from the social role of daughter and woman to mother, and factors of daily life, influence psychological health, predisposing it to a greater or lesser extent to stress.+ However, it is emphasized that situations experienced after childbirth interfere in the perception of the stressors when responding to the scale, so the use of PSS-10.

These results are worrying and deserve attention, as high and persistent stress levels cause the body to increase catecholamines and cortisol in the bloodstream, resulting in long-term wear and loss of the body,[18] with possible impacts in breastfeeding. Therefore, the control and management of stress situations and the individual perception of stress are necessary, and the practice of physical activities consists of an important ally.[19]

Given this context, it becomes necessary that the nursing team that attends these puerperal women are able to identify stressful situations that they experience, so as to be able to provide an individualized and humanized care, emphasizing that care is the essence of their practice, through measures Administrative and assistance, to reduce the patient's stress. In view of this, nursing is strengthened in promoting the necessary conditions for the care of body and mind, consolidates new experiences and enriches its capacity to care, in such a way that it avoids a reductionist context.

When analyzing the coping strategies, it was verified that the highest average factors were positive reassessment, social support, and problem-solving, which means that they were the most used by the puerperal women to cope with stressors. Among the eight factors, the ones that presented lower averages, therefore, escape and avoidance, seclusion and confrontation were less used.

The Positive Reassessment was the most used factor for the puerperal women in the search to positively assess the situation with a focus on personal growth.[5] Among the strategies of this factor, "I have rediscovered what is important in life" was the most used. It is believed that the use of the same is related to personal satisfaction and unconditional love for the baby's birth. The first few minutes after childbirth is considered to be a precursor of attachment, since when she has him in her arms, the puerpera feels gratitude, comfort and enhances the maternal manifestation as well as the formation of a bond between mother and child.

The Social Support was the second most used factor, which means that the puerperal women appealed to the people of their environment in search of emotional support. About this factor, the item "I accepted the sympathy and the understanding of the people" was the highest average, which means that in the face of problems, the support of family, friends or other people will contribute positively to the trajectory of the puerpera at this time. Family affection and loved ones allow stability to fight against adversity and overcome problems and emotional needs, as well as encouraging women to face new challenges.

Problem-solving was the third most used factor, and is characterized by deliberate efforts focused on the problem to change the situation.[5] Among the items that make up this factor, the strategy "I knew what I should have done, therefore, I doubled my efforts to do what was necessary" was the most used, because the individual defines the problem, enumerates and compares the alternatives with the desired results, as well as elaborates a plan of action. Thus, it is considered that as the puerperal women identify the problems and their demands, they mobilize themselves to face the exhausting situation in an attempt to modify it. These strategies can be evaluated as positive and directly related to the adequate coping of stress and the birth of the baby.

Escape and avoidance was the strategy least used by puerperal women, being the factor "put my anger at another person(s)", the least used. This is justified by the stage that women are living, since the birth of a baby, their insertion into the labor market, triple journey, and the increase of the instructions level, all together causes them to use other strategies as aforementioned. In this respect, it should be pointed out that the identification of strategies for coping with stressors should occur as early as possible because it allows the choice of the best course of action with a positive influence on the emotional state of women in the postpartum period.[21]

A study carried out in Colombia analyzed the process of adaptation and coping of women in the puerperium, and found that it produces significant changes in couples, families and especially in women.[22] Among these changes are the physiological, psychological, family and cultural changes, of which correct coping is necessary to maintain their physical

and mental well-being.[22] Already, research that evaluated the relationship between resilience and the adjustment to motherhood concluded that resilient mothers have greater strength and flexibility to recover from adversity, as well as those with less resilience present more negative attitudes.[23] It is emphasized that it is in the CPP that women present better adjustment and positive attitudes regarding the maternity.[23]

Hence, it is important that health care professionals consider the information and life habits, as well as the knowledge, experiences, taboos, beliefs, habits and cultural practices that are due to family coexistence,[24] because these interfere with the perception of stress and in the choice of coping strategies.[25] Thus, nursing can contribute to the quality of care when elaborating interventions focused on the actual needs of the puerperal woman. Facing this scenario, it is necessary to use the health professionals as instruments on the psycho-emotional needs of puerperal women, as well as the implementation of actions aimed at promoting and strengthening the development of new coping strategies.

Furthermore, it is pointed out that the presence of pain is influenced by psychological factors, which are altered in the puerperal phase, which may be related to the perception of stress and the use of coping strategies to cope with stressors, common aspects during the period after a cesarean section. It is inferred that since pain compromises activities, makes it difficult to start the movement and delays mother-child contact, it must be prevented and when present, properly identified, evaluated and adequately treated by the nursing team.

CONCLUSIONS

This study allowed the identification of socio-demographic/clinical characteristics of postpartum women in their CPP, as well as the evaluation of pain, perceived stress and coping. Because it is a surgical and invasive procedure, the biopsychosocial health of the puerperium may be compromised by the presence of pain, which determines the need for qualified assistance from the multi-professional team, especially nursing, during the CPP, since the approach will be contribute to the achievement of satisfactory results in their recovery.

It was corroborated that the puerperal women perceived the situations experienced in the last 30 days as stressors, which was attested by the high means of the PSS-10. This result reveals the importance of the nursing team attending to the emotional side, which is able to identify experienced stress situations, in order to provide an individualized and humanized care.

The puerperal women used coping strategies focused on the problem, which can favor the confrontation of the stressors in a positive way. In this sense, it is important that the nurse encourages the use and strengthening of new coping strategies, focused mainly on positive reassessment, social support, and problem-solving approaches for reducing stress and coping more effectively.

Knowledge of pain, perceived stress and coping strategies of a group of patients with common characteristics can guide nursing care in addition to providing subsidies for the elaboration and implementation of interventions, training, and qualification of the nursing team. Therefore, it is fundamental to develop research related to this matter, which in addition to qualifying nursing care contribute to the development of nursing as a science.

REFERENCES

1. Oliveira AR. Fatores associados e indicações para a prática de cesariana: um estudo caso-controle. Rev Port Med Geral Fam. 2013;29(3):151-9.
2. Silva JA, Ribeiro-Filho, Pinto N. A dor como um problema psicofísico. Rev Dor. 2011;12(2):138-51.
3. Beleza ACS, Ferreira CHJ, Sousa L, Nakano AMS. Mensuração e caracterização da dor após episiotomia e sua relação com a limitação de atividade. Rev Bras Enferm. 2012;65(2):264-8.
4. Lazarus RS, Launier S. Stress related transaction between person and environment. In: Dervin LA, Lewis M. Perspectives in international psychology. New York: Plenum. 1978.
5. Lazarus RS, Folkman S. Stress, appraisal and coping. New York: Springer Publishing Copany. 1984.
6. Melzak R. The short-form McGill pain questionnaire. Pain. 1987;30(2):191-7.
7. Reis R, Hino AAF, Añez CRR. Perceived stress scale: realiability and validity study in Brazil. J Health Psychol. 2010;15(1):107-14.
8. Savóia MG, Santana PR, Mejias NP. Adaptação do inventário estratégias de coping de Folkman e Lazarus para o português. Psicol USP. 1996;7(1/2):183-201.
9 Sousa L, Pitangui ACR, Gomes FA, Nakano MAS, Ferreira CHJ. Mensuração e características de dor após cesárea e sua relação com limitação de atividades. Acta Paul Enferm. 2009;22(6):741-7.
10 Francisco AA, Oliveira SMJV, Santos JO, Silva FMB. Avaliação e tratamento da dor perineal no pós-parto vaginal. Acta Paul Enferm. 2011;24(1):94-100.
11. Souza ASR, Amorin MME, Porto AMF. Indicações de cesariana baseadas em evidências: parte II. Femina. 2010;38(9): 459-68.
12. Sakae TM, Freitas PF, d´Orsi E. Fatores associados a taxas de cesárea em hospital universitário. Rev Saúde Pública. 2009;43(3):472-80.
13. Varella RSO. Avaliação da dor no pós operatório de cesareana através da utilização do questionário de MCGILL [Dissertação]. Rio de Janeiro (RJ): Instituto Fernandes Figueira, Fundação Oswaldo Cruz (FIOCRUZ); 2011.
14. Mathias AERA, Pitangui ACR, Vasconcelos AMA, Silva SS, Rodrigues PS, Dias TG. 14. Cançado. Perineal pain measurement in the immediate vaginal postpartum period. Rev Dor. 2015;16(4):267-71.
15. 14. TOB, Omais M, Ashmawi HA, Torres MLA. Dor crônica pós-cesariana. Influência da técnica anestésico-cirúrgica e da analgesia pós-operatória. Rev Bras Anestesiol. 2012;62(6):762-74.
16. Eshkevari L, Trout KK, Damore J. Management of Postpartum Pain. J Midwifery Women's Health. 2013;58(6):622–31.
17. Osman H, Saliba M, Chaaya M, Naasan G. Interventions to reduce postpartum stress in first-time mothers: a randomized-controlled trial. BMC Women's Health. 2014;14(125):1-8.
18. Segato L, Andrade A, Vasconcellos DIC, Matias TS, Rolim MKSB. Ocorrência e controle do estresse em gestantes sedentárias e fisicamente ativas. Rev Educ Fís (UEM). 2009;20(1):121-9.
19. Rodrigues OMP, Schiavo RA. Stress na gestação e no puerpério: uma correlação com a depressão pós-parto. Rev Bras Ginecol Obstet. 2011;33(9):252-7.
20. Correia DS, Santos LVA, Calheiros AMN, Vieira MJ. Adolescentes grávidas: sinais, sintomas, intercorrências e presença de estresse. Rev Gaúcha Enferm. 2011;32(1):40-7.
21. Makara-Studzińska M, Zwierz K, Madej A, Wdowiak A. Coping with stress by women in early postpar-tum. J Public Health, Nursing Med Rescue. 2015;4:38-43.

22. Romero AMO, Rodriguez LM, Cardenas CHR. Coping and adaptation process during puerperium Proceso de afrontamiento y adaptación durante el puerperio. Colomb Méd. 2012;43(2):167-74.
23. Felgueiras MCMA, Graça LCC. Resiliência e ajustamento à maternidade no pós-parto. Rev Enferm Referência. 2013;3(11):77-84.
24. Vieira F, Bachion MM, Salge AKM, Munari DB. Diagnósticos de enfermagem da NANDA no período pós-parto imediato e tardio. Esc Anna Nery Rev Enferm. 2010;14(1):83-9.
25. Guardino CM, Schetter CD. Coping during pregnancy: a systematic review and recommendations. Health Psychol Rev. 2014;8(1):70–94.

Received on: 04/21/2017
Required Reviews: None
Approved on: 05/16/2017
Published on: 01/15/2019

***Corresponding Author:**
Eliane Raquel Rieth Benetti
Rua do Comércio, 2425, Apto 004
Pindorama, Rio Grande do Sul, Brazil
E-mail address: elianeraquelr@yahoo.com.br
Telephone number: +55 38 3221-0097
Zip Code: 98.700-000

The authors claim to have no conflict of interest.