DOI 10.18471/rbe.v34.35763
Original Article

INFLUENCE OF EPIDEMIOLOGICAL FACTORS ON FOLLOW-UP AND APPEARANCE OF PUERPERAL PROBLEMS

INFLUÊNCIA DE FATORES EPIDEMIOLÓGICOS NO SEGUIMENTO E APARECIMENTO DE PROBLEMAS PUERPERAIS

INFLUENCIA DE FACTORES EPIDEMIOLÓGICOS EN EL SEGUIMIENTO Y LA APARICIÓN DE PROBLEMAS PUERPERALES

Isabela Cristina Beskow Oliveira[1]
Rosane Meire Munhak da Silva[2]
Helder Ferreira[3]
Rosangela Aparecida Pimenta Ferrari[4]
Adriana Zilly[5]

How to cite this article: Oliveira ICB, Silva RMM, Ferreira H, Ferrari RAP, Zilly A. Influence of epidemiological factors on follow-up and appearance of puerperal problems. Rev baiana enferm. 2020;34:e35763.

Objective: to describe the influence of epidemiological factors on the puerperal follow-up and on the emergence of health problems in the region covered by the *Mãe Paranaense* Network. Method: descriptive, quantitative research, with 280 puerperal women from counties of the ninth Health Region of Paraná, held in the second half of 2017 and first half of 2018, organized in two steps: in the rooming-in care of maternities and in the homes, six months after the birth. Results: the appointment in the first week after delivery was performed by 51.1% of the puerperal women, and with 42 days, by 76.8%. Low age and schooling were associated with the non-completion of appointments. There were 20.7% of puerperal women with clinical problems, 53.2% with emotional symptoms, and approximately 10% with depressive symptoms and suicidal thoughts. Conclusion: epidemiological factors influence the poor adherence to puerperal appointments, but not the emergence of health problems in the puerperium.

Descriptors: Postpartum Period. Epidemiologic Factors. Women's Health. Nursing Care.

Objetivo: descrever a influência de fatores epidemiológicos para o seguimento puerperal e para o aparecimento de problemas de saúde em região coberta pela Rede Mãe Paranaense. Método: pesquisa descritiva, quantitativa, com 280 puérperas de municípios da nona Regional de Saúde do Paraná, realizada no segundo semestre de 2017 e primeiro de 2018, organizada em duas etapas: no alojamento conjunto de maternidades e nos domicílios, após seis meses do parto. Resultados: a consulta na primeira semana após o parto foi realizada por 51,1% das puérperas, e com 42 dias 76,8%. Baixa idade e escolaridade foram associadas a não realização das consultas. Identificou-se 20,7% de puérperas com problemas clínicos, 53,2% com sintomas emocionais, e aproximadamente 10% com

[1] Nurse. Independent researcher. Foz do Iguaçu, Paraná, Brazil. http://orcid.org/0000-0002-2482-654X.
[2] Nurse. PhD in Sciences. Adjunct Professor at the Universidade Estadual do Oeste do Paraná. Foz do Iguaçu, Paraná, Brazil. zanem2010@hotmail.com. http://orcid.org/0000-0003-3355-0132.
[3] Nurse. PhD in Sciences. Adjunct Professor at the Universidade Estadual do Oeste do Paraná. Foz do Iguaçu, Paraná, Brazil. http://orcid.org/0000-0003-0715-8057.
[4] Nurse. PhD in Sciences. Adjunct Professor at the Universidade Estadual de Londrina. Londrina, Paraná, Brazil. http://orcid.org/0000-0003-0157-7461.
[5] Biologist. PhD in Sciences. Associate Professor at the Universidade Estadual do Oeste do Paraná. Foz do Iguaçu, Paraná, Brazil. http://orcid.org/0000-0002-8714-8205.

sintomas depressivos e pensamentos suicidas. Conclusão: fatores epidemiológicos têm influência para a adesão insatisfatória de consultas puerperais, mas não para o aparecimento de problemas de saúde no puerpério.

Descritores: Período Pós-parto. Fatores Epidemiológicos. Saúde da Mulher. Cuidados de Enfermagem.

Objetivo: describir la influencia de los factores epidemiológicos para el seguimiento puerperal y la aparición de problemas de salud en la región cubierta por la Red Mãe Paranaense. Método: estudio descriptivo, cuantitativo, con 280 puérperas de municipios de la novena Salud Regional de Paraná, que tuvo lugar en la segunda mitad de 2017 y primera mitad de 2018, organizada en dos pasos: en el alojamiento conjunto de las maternidades y en los hogares, seis meses después del nacimiento. Resultados: la consulta en la primera semana después del parto fue realizada por el 51,1% de las puérperas, y con 42 días, por el 76,8%. Baja edad y escolaridad se asociaron con la no realización de consultas. Se identificó el 20,7% de puérperas con problemas clínicos, el 53,2% con síntomas emocionales, y aproximadamente el 10% con síntomas de depresión y pensamientos suicidas. Conclusión: factores epidemiológicos influyen en la adherencia deficiente de consultas puerperales, pero no en la aparición de problemas de salud en el puerperio.

Descriptores: Período Posparto. Factores Epidemiológicos. Salud de la Mujer. Atención de Enfermería.

Introduction

The postpartum period, also known as puerperium, begins after the placental expulsion and ends when the woman's body returns to the pre-pregnancy conditions, around six weeks after delivery. It is considered an important moment of transition for the woman, with intense changes in biological, psychological, behavioral and sociocultural dimensions[1].

These transformations, isolated or grouped, can result in vulnerabilities for women who experience post-partum. Thus, in the postpartum period, those women need to be met in their entirety, through an integral view that contemplates all their dimensions, considering that many aspects can harm their physical and mental health, as well as may interfere with attention to their health in this weakness period[2-3].

In the context of follow-up policies in Brazil, the aspects referred to usually involve low maternal age, schooling and income, impaired marital situation, lack of family support, culture, parity, inadequate follow-up in the pre-natal care, previous health problems, and lack of access to health services, among others[4-5]. An american study identified that maternal age above 35 years, black ethnicity, history of previous health problems significantly increase the risk of women present post-partum complications requiring hospital readmissions[6].

According to the Brazilian Ministry of Health (MOH), health professionals need to be aware of and prepared to meet the needs and the aspects that jeopardize the health of the mother and child, as well as should seize the opportunity to contact the woman to enable actions that make up the "First Week of Integral Health". In this contact, in addition to the newborn care, they can analyze pregnancy and childbirth, if there were complications, how the service occurred, use of medications, breastfeeding, pain, vaginal flow/bleeding, food, sleep, physical activities, family planning, psychological-emotional and social conditions[7].

The recommendation of the Ministry of Health, as well as the *Mãe Paranaense* Network (RMP), policy of maternal and child health care, in force in the state of Paraná since 2012, involves a home visit during the first week after the baby's discharge, preferably until the fifth day of life, and the return of the woman and the newborn to the health service, for a medical or nursing appointment, with 42 days after delivery[7-8].

Given the importance of the puerperal follow-up, considering the weaknesses present in this important phase of a woman's life and the need for skilled and timely practices to promote maternal health and prevent diseases, this study aims to describe the influence of epidemiological factors on the puerperal follow-up and on the emergence of health problems in the region covered by the RMP.

Method

Descriptive, cross-sectional research, with quantitative approach, performed in maternities in the counties belonging to the ninth Health Region of the State of Paraná, selected by drawing lots: Foz do Iguaçu, Santa Terezinha de Itaipu, Medianeira, Serranópolis do Iguaçu, Matelândia, São Miguel do Iguaçu, Missal, Itaipulândia and Ramilândia, all covered by the RMP.

The participants were puerperal women submitted to normal deliveries and cesarean sections with preterm births in counties belonging to the ninth Health Region. There was exclusion of mothers with mental health problems described in medical records and women with impossibility of home visit after three attempts, because of missing address, change of telephone or by being absent at the time of the visit.

The sample size calculation was performed based on the number of births in the year 2015, considering N size (number of elements) of the population; n size (number of elements) of the sample; n^0 a first approximation to the sample size; E_0 tolerated sampling error[9]. By knowing the size of the population, there was the sample size calculation in the following expression:

$$n^0 = 1 / (E_0)^2 . 0.05 = 400$$

Knowing the size of the population, the formula for the previous calculation was replaced by:

$$n = N . n^0 / N + n_0$$

The margin of error was of 5% and the confidence level, of 95%. The safety margin defined was 10%; however, since this study was of follow-up type, there were larger losses during the data collection period, either by a change of address or phone number. The first stage of the research involved 397 puerperal women and the second, 280, amounting to a loss of 29.47% of the participants.

The data collection was organized into two distinct stages, in the second half of 2017 and in the first half of 2018. The first step happened in three maternities, where occurred the presentation of the research objectives and the signature of the Informed Consent Form (ICF) was collected, thus performing a brief characterization of the participants.

The hospital institutions involved were:

a) Foz do Iguaçu, references for all pregnant women from the county and from Santa Terezinha de Itaipu, regardless of the gestational risk, and reference also for high-risk pregnancies for the nine counties that composse the ninth health region;

b) Medianeira, reference for usual-risk pregnancies for the county and Serranópolis do Iguaçu;

c) Matelândia, reference for usual-risk pregnancies for the county and Ramilândia.

For the second step, there was a home visit, approximately six months after delivery, to seek information on the puerperal follow-up and complications presented during this period. For this purpose, a structured instrument was used, containing the following variables: puerperal appointment in the first postpartum week (yes or no); puerperal appointment (yes or no); health problems (yes or no); emotional conditions present (calm, nervous, anxious, depressed) and emotional symptoms (lack of interest in herself, loss of pleasure, lack of energy and motivation, feelings of worthlessness and guilt, changes in appetite or weight, recurring thoughts of death or suicide, sleeping more or less than usual, negative feelings with the baby, if there was doubt about being able to look after the baby; feelings of incompetence, lack of interest in the baby, crying without reason, others).

Data collection was carried out by students from the fourth and fifth years of the nursing graduate course of a government institution, who received prior training for the search of information.

Data were analyzed through the □2 test and G Test, aiming to determine the possible difference, adopting a significance level of 5%. Data analysis was performed using the software Statistica 8.0.

The research was submitted to and approved by the Research Ethics Committee (REC) of the State University of Londrina, under Opinion n. 2.053.304, CAAE: 67574517.1.1001.5231, and complied with the standards of Resolution n. 466/2012, which involves researches with human beings.

Results

The results showed that 51.1% of 280 women participating in the research attended the puerperal appointment in the first postpartum week. Table 1 shows factors that may influence the achievement of such appointment, and, through the statistical analyses, there were no significant differences that might favor or not the accomplishment of such appointment in the first post-partum week.

Table 1 – Relationship between epidemiological factors and accomplishment, or not, of the puerperal appointment in the first postpartum week. Foz do Iguaçu, Paraná, Brazil – 2018 (N=280)

Variables	1st-week appointment		No 1st-week appointment		*p* value
	n	%	n	%	
Age					0,0746*
≤19 years	16	11.19	29	21.17	
20 - 34 years	106	74.13	91	66.42	
≥35 years	21	14.69	17	12.41	
Race/color					0.8309**
White	77	53.85	75	54.74	
Black	12	8.39	10	7.30	
Pardo	52	36.36	51	37.23	
Others	1	0.70	1	0.73	
No record	1	0.70	0	0.00	
Education					
Complete primary education	14	9.79	8	5.84	0.0721**
Incomplete primary education	26	18.18	34	24.82	
Complete secondary education	55	38.46	58	42.34	
Incomplete secondary education	22	15.38	28	20.44	
Complete higher education	15	10.49	5	3.65	
Incomplete higher education	9	6.29	3	2.19	
No education	2	1.40	1	0.73	
Marital situation					
With partner	132	92.31	125	91.24	0.7452*
No partner	11	7.69	12	8.76	
Other children					
Yes	88	61.54	74	54.01	0.2025*
No	55	38.46	63	45.99	
Maternal occupation					
Paid	74	51.75	59	43.07	0.1820*
Unpaid	69	48.25	78	56.93	
Family income					
Under 1 minimum wage	32	22.38	21	15.33	0.1831**
1 - 2 minimum wages	62	43.36	64	46.72	
2 - 3 minimum wages	31	21.68	35	25.55	
Over 3 minimum wages	17	11.89	12	8.76	
Uninformed	1	0.70	5	3.65	
Family allowance					
Yes	22	15.38	22	16.06	0.8769*
No	121	84.62	115	83.94	

Source: Created by the authors.

*Chi-Square Test. **G Test.

Although without statistical significance, factors such as low age, education and income, as well as not having other children and a paid occupation were more prevalent among women who did not attend the puerperal follow-up in the first week.

Concerning the implementation of the puerperal appointment in the period of 42 days after the birth, 76.8% of the women attended the appointment and epidemiological factors may jeopardize the puerperal care continuity (Table 2).

Table 2 – Relationship between epidemiological factors and accomplishment of the puerperal appointment in the period of 42 postpartum days. Foz do Iguaçu, Paraná, Brazil – 2018 (N=280)

Variables	Puerperal appointment		No puerperal appointment		*p* value
	n	%	n	%	
Age					0.0007*
≤19 years	25	11.63	20	30.77	
20 - 34 years	157	73.02	40	61.54	
≥35 years	33	15.35	5	7.69	
Race/color					0.6973**
White	119	55.35	33	50.77	
Black	16	7.44	6	9.23	
Pardo	77	35.81	26	40.00	
Others	2	0.93	0	0.00	
No record	1	0.47	0	0.00	
Education					0.0022**
Complete primary education	19	8.84	3	4.62	
Incomplete primary education	40	18.60	20	30.77	
Complete secondary education	88	40.93	25	38.46	
Incomplete secondary education	34	15.81	16	24.62	
Complete higher education	3	1.40	0	0.00	
Incomplete higher education	20	9.30	0	0.00	
No education	11	5.12	1	1.54	
Marital situation					0.4899*
With partner	196	91.16	61	93.85	
No partner	19	8.84	4	6.15	
Other children					0.4548*
Yes	88	40.93	30	46.15	
No	127	59.07	35	53.85	
Maternal occupation					0.0959*
Paid	108	50.23	25	38.46	
Unpaid	107	49.77	40	61.54	
Family income					0.0726**
Under 1 minimum wage	37	17.21	16	24.62	
1 - 2 minimum wages	100	46.51	26	40.00	
2 - 3 minimum wages	51	23.72	15	23.08	
Over 3 minimum wages	25	11.63	4	6.15	
Uninformed	2	0.93	4	6.15	
Family allowance					
Yes	31	14.42	13	20.00	0.2786*
No	184	85.58	52	80.00	

Source: Created by the authors.

*Chi-Square Test. **G Test.

There is a significant difference between education and attending the puerperal appointment. The residual analysis showed that mothers with incomplete primary education were the ones that least attended the appointment, and the mothers with incomplete higher education were those that most attended the puerperal appointments. The adjusted residual analysis showed that the largest difference was observed for mothers aged under 19 years old, of whom the majority did not attend the appointment.

In the puerperal period, there may arise problems of physical and psychological health. In this way, the follow-up of the puerperal women's health becomes essential. Of the women, 20.7% presented clinical problems, and, as shown in Table 3, there was no statistically significant relationship between epidemiological factors and increased chances of health problems.

Table 3 – Relationship between epidemiological factors and the appearance of clinical problems in the puerperal period. Foz do Iguaçu, Paraná, Brazil – 2018 (N=280)

(continued)

Variables	Clinical problems		No clinical problems		*p* value
	n	%	n	%	
Age					0.2008*
≤19 years	8	13.79	37	16.67	
20 - 34 years	38	65.52	159	71.62	
≥35 years	12	20.69	26	11.71	
Race/color					0.1194**
White	35	60.34	117	52.70	
Black	2	3.45	20	9.01	
Pardo	19	32.76	84	37.84	
Others	2	3.45	0	0.00	
No record	0	0.00	1	0.45	
Education					0.2845**
Complete primary education	2	3.45	20	9.01	
Incomplete primary education	13	22.41	47	21.17	
Complete secondary education	24	41.38	89	40.09	
Incomplete secondary education	8	13.79	42	18.92	
Complete higher education	0	0.00	3	1.35	
Incomplete higher education	6	10.34	14	6.31	
No education	5	8.62	7	3.15	
Marital situation					0.8998**
With partner	53	91.38	204	91.89	
No partner	5	8.62	18	8.11	
Other children					0.6665*
Yes	23	39.66	95	42.79	
No	35	60.34	127	57.21	
Maternal occupation					0.1075*
Paid	33	56.90	100	45.05	
Unpaid	25	43.10	122	54.95	
Family income					0.1727**
Under 1 minimum wage	15	25.86	38	17.12	
1 - 2 minimum wages	18	31.03	108	48.65	
2 - 3 minimum wages	16	27.59	50	22.52	
Over 3 minimum wages	7	12.07	22	9.91	
Uninformed	2	3.45	4	1.80	

Table 3 – Relationship between epidemiological factors and the appearance of clinical problems in the puerperal period. Foz do Iguaçu, Paraná, Brazil – 2018 (N=280) (conclusion)

Variables	Clinical problems		No clinical problems		*p* value
	n	%	n	%	
Family allowance					0.9631*
Yes	9	15.52	35	15.77	
No	49	84.48	187	84.23	

Source: Created by the authors.

*Chi-Square Test. **G Test.

Similarly, 53.2% of women described the presence of some emotional symptom. Table 4 shows that there were no statistically significant differences between the epidemiological factors and the likelihood of emotional problems and symptoms for the region under study.

Table 4 – Relationship between epidemiological factors and the presence of emotional symptoms in the puerperal period. Foz do Iguaçu, Paraná, Brazil – 2018 (N=280) (continued)

Variables	Emotional symptoms		No emotional symptoms		*p* value
	n	%	n	%	
Age					
≤19 years	26	17.45	19	14.50	0.7393*
20 - 34 years	102	68.46	95	72.52	
≥35 years	21	14.09	17	12.98	
Race/color					
White	86	57.72	66	50.38	0.5479**
Black	10	6.71	12	9.16	
Pardo	52	34.90	51	38.93	
Others	1	0.67	1	0.76	
No record	0	0.00	1	0.76	
Education					
Complete primary education	9	6.04	13	9.92	0.6394**
Incomplete primary education	37	24.83	23	17.56	
Complete secondary education	57	38.26	56	42.75	
Incomplete secondary education	28	18.79	22	16.79	
Complete higher education	1	0.67	2	1.53	
Incomplete higher education	10	6.71	10	7.63	
No education	7	4.70	5	3.82	
Marital situation					
With partner	132	88.59	125	95.42	0.0631*
No partner	17	11.41	6	4.58	
Other children					
Yes	65	43.62	53	40.46	0.5924*
No	84	56.38	78	59.54	
Maternal occupation					
Paid	70	46.98	63	48.09	0.8525*
Unpaid	79	53.02	68	51.91	

Table 4 – Relationship between epidemiological factors and the presence of emotional symptoms in the puerperal period. Foz do Iguaçu, Paraná, Brazil – 2018 (N=280) (conclusion)

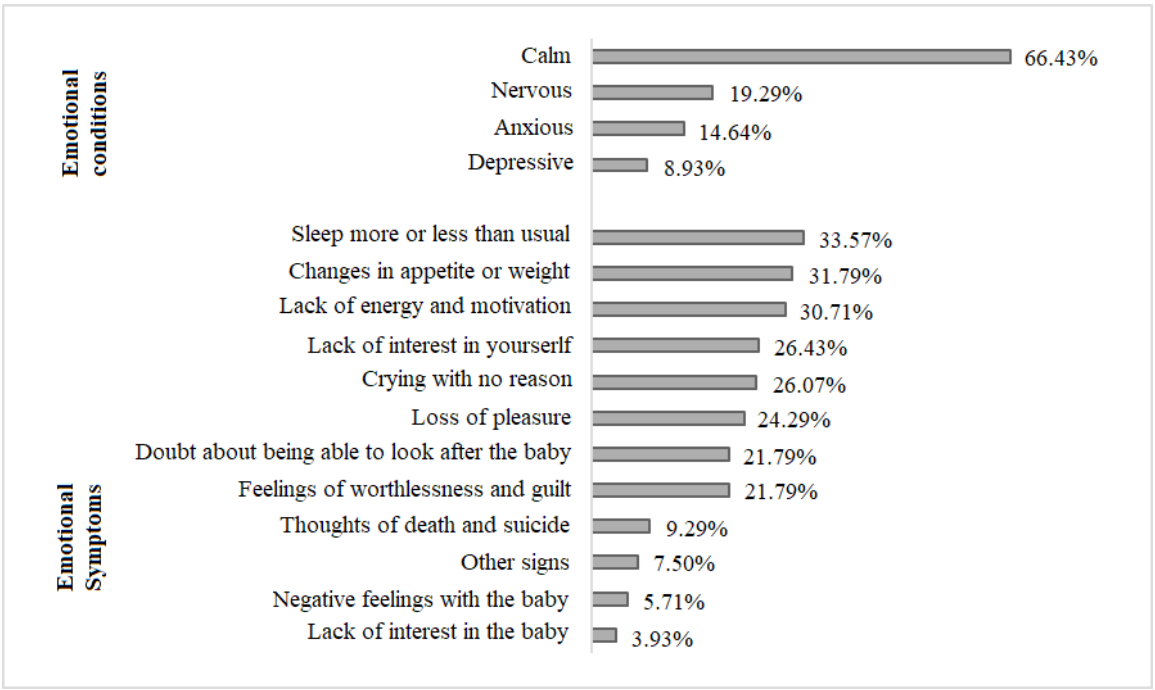
Variables	Emotional symptoms		No emotional symptoms		*p* value
	n	%	n	%	
Family income					
Under 1 minimum wage	33	22.15	20	15.27	0.6615**
1 - 2 minimum wages	64	42.95	62	47.33	
2 - 3 minimum wages	33	22.15	33	25.19	
Over 3 minimum wages	16	10.74	13	9.92	
Uninformed	3	2.01	3	2.29	
Family allowance					
Yes	23	15.44	21	16.03	0.9775*
No	126	84.56	110	83.97	

Source: Created by the authors.

*Chi-Square Test. **G Test.

Although these results have not shown statistical significance, emotional symptoms were more frequent in women of age extremes, white, without a partner and unpaid profession. Many of these women described unfavorable emotional conditions, and approximately 20% reported being nervous and 30% reported emotional symptoms, which may undermine the process of motherhood, as presented in Graph 1.

Graph 1 – Emotional conditions and symptoms presented by women in the puerperal period. Foz do Iguaçu, Paraná, Brazil – 2018 (N=280)



Source: Created by the authors.

What stands out is that the emotional symptoms described by the puerperal women involved since feelings about self-care, to the care with the baby at home. Approximately 10% of the puerperal participants presented depressive symptoms and suicidal thoughts.

Discussion

The results showed that only half of the participants attended the puerperal appointment in the first postpartum week in the studied region. According to the RMP, the professionals working in Primary Health Care (PHC) shall conduct a home visit during the first week after delivery and birth (until the 5th day), for monitoring the health of the puerperal woman and the child, as well as should ensure an appointment in the postpartum period, in the first postpartum week. The reason for the early follow-up refers to the high rates of maternal morbidity and mortality in the early neonatal period, that is, in the first six days of life[8].

Another aspect to highlight refers to the adherence of women to the puerperal appointment within 42 days, or even extended to up to 90 days, which did not reach their totality. Factors such as the low age and education were present among women who did not adhere to the puerperal appointment in this study. According to researchers, early pregnancy and the lack of health follow-up in these situations can relate to less favored economic classes, unemployment, early insertion in the informal labor market, school dropouts and marital challenges[4-5], bearing in mind that this young woman and with low schooling has difficulties to understand the need for and importance of continuing under follow-up, even without presenting health problems.

In addition to these factors for the lack of adherence to puerperal follow-up, a review study conducted by researchers from Bahia indicated that, although the professional assistance in the puerperal period is fundamental to potentiate the maternal and child health, in practice, this service is little appreciated by women, bearing in mind that, after the birth, the mother focuses only on her child's health, not performing the follow-up of her health, and, in general, not attending puerperal appointments[10]. The same phenomenon occurred in the studied scenario, despite an own policy for maternal and child health in Paraná.

Furthermore, the educational practices developed by health professionals in primary care services still remain tied to traditional lectures, with predominance of the traditional pedagogical practice, using precarious resources and accessible language, however, little interactive and resulting in low participation of users[11], especially when it comes to a younger population with low education levels, as found in the present study.

Regarding the health problems in the puerperal period, approximately 20% of the participants showed clinical problems, corroborating other studies that showed that the main maternal problems in this period include infections, headaches, hypertension, breast engorgement, mastitis, early weaning, among others[12-14]. Having in view that the problems can be simple, or require greater attention, the puerperal assistance, in particular in the home environment, will identify and intervene directly in these everyday problems, minimizing injuries and contributing to health promotion[15]. The absence of health problems leads many women to believe that the puerperal follow-up is not necessary.

A Brazilian study showed that the presence of puerperal complications has extensive relationship with the prenatal care and with cesarean sections. Based on those findings, the authors highlighted the need to improve the health care of pregnant women, increasing the number of prenatal visits, as well as encouraging the appreciation of normal delivery, aiming to reduce maternal morbidity, particularly in the puerperal period[16].

In addition to physical problems, more than 50% of the participants had emotional problems or symptoms in the postpartum period. Although not statistically significant, the extremes of age, the lack of a partner and low income were aspects that showed to be predictors of emotional symptoms.

A study with British women showed that the postpartum fatigue is not inevitable and can affect a substantial proportion of women, and the age and parity are predictors for the onset of emotional symptoms, but the practical help and the support of partners can act as protective factors[5]. Another American study showed

that 63% of low-income women may present emotional symptoms between one and three postpartum months[17-18].

Aspect evidenced by other studies for the emergence of emotional fatigue in the puerperal period was the presence of clinical problems such as anemia, infection and bleeding, as well as the low socioeconomic level, unemployment, primiparity, and increased maternal age, although they also had no statistical significance in the studies[17,19-21]. In this sense, another American study identified the relationship between unfavorable socioeconomic situation and the worsening of sleep patterns and, consequently, emotional symptoms and maternal fatigue in the puerperal period[22].

A Brazilian study highlighted that the puerperal follow-up allows identifying signs and symptoms that lead to risks to physical health, because this is a period appropriate to identify adversities to which families are exposed, such as financial difficulties, often linked to the risk of not achieving healthy life conditions, significantly present among families in developing countries like Brazil. In those dimensions, the professional activity extends beyond the biological factors, favored by the strategy of home visits, an important tool for health promotion and surveillance[23].

In relation to the signs and symptoms presented by women six months after the birth, the most everyday symptoms, such as lack of sleep, altered appetite, desire to cry and lack of motivation were the most commonly found, however, more intense symptoms such as depression and suicidal thoughts were present in approximately 10% of the participants.

Surveys show that most women experience some type of mental disorder in the postpartum period, with changes in mood and mild depression[5,24]. Nevertheless, some women may present more severe symptoms, triggering a severe depression or even psychosis. Importantly, milder symptoms presented continuously may lead to maternal overload, and consequently, to more severe symptoms[5].

The postpartum psychosis refers to a severe form of mental disorder characterized by extreme confusion, loss of contact with reality, paranoia, delusions, disorganized thinking processes and hallucinations[25]. It can affect about two every thousand women of fertile age and occurs within the first six weeks after childbirth. Although relatively rare, it is seen as a psychiatric emergency, considering the imminent risk of suicide or infanticide[5].

Considering that many women have unfavorable emotional conditions in the puerperal period and require additional care, studies indicate as intervention strategies the self-management, support by phone or home visits, exercises and educational health technologies[22,25]. Furthermore, directed support and availability for advice to meet the unique needs of each puerperal woman should be encouraged among professionals and health services. It is important to emphasize that adverse situations in the process of birth, such as prematurity, may represent decisive factors for the maternal emotional suffering, requiring a preparation of the family for the coping with and transition of parenthood[5].

As limitations of the present study, there is need to give voice to the puerperal women and health professionals in primary care services so that they can point out the determinant factors to contemplate the integrality of the health actions in the puerperal period.

Conclusion

The results pointed out the poor adhesion of puerperal appointments, both for the appointment within the first week after delivery as for the appointment until 42 days after delivery, and identified the relationship between the non-completion of appointments with 42 days of puerperium and low maternal age and schooling. Clinical problems in the postpartum period were present in approximately 20% of women, and emotional symptoms, described by more than half of the participants, were worrying for the study scenario.

Epidemiological factors influence the poor adherence to puerperal consultations, but not the emergence of health problems in the puerperium.

In this way, there is need to emphasize the need for strategies to increase adherence to the appointments in the postpartum period, and thus, fully meet the woman in the puerperium, adopting important tools such as home visits and educational technologies to fully meet the maternal health in the postpartum period, by creating opportunities to provide actions aimed at health promotion and prevention of diseases in individual and collective dimensions.

Despite the existence of governmental policies to maternal health care in the puerperium, such as the proposal of the RMP, there is need to extend those actions and actually put them into practice, with a view to meet the real needs of families.

Funding sources:

Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq).

Collaborations:

1 – conception, design, analysis and interpretation of data: Isabela Cristina Beskow Oliveira, Rosane Meire Munhak da Silva, Helder Ferreira, Rosangela Aparecida Pimenta Ferrari and Adriana Zilly;

2 – writing of the article and relevant critical review of the intellectual content: Rosane Meire Munhak da Silva, Rosangela Aparecida Pimenta Ferrari and Adriana Zilly;

3 – final approval of the version to be published: Isabela Cristina Beskow Oliveira, Rosane Meire Munhak da Silva, Helder Ferreira, Rosangela Aparecida Pimenta Ferrari and Adriana Zilly.

References

1. Corrêa MSM, Feliciano KVO, Pedrosa EN, Souza AI. Acolhimento no cuidado à saúde da mulher no puerpério. Cad saúde pública. 2017:33(3):e00136215. DOI: 10.1590/0102-311X00136215
2. Mazzo MHSN, Brito RS. Instrumento para consulta de enfermagem à puérpera na atenção básica. Rev bras enferm. 2016;69(2):294-303. DOI: http://dx.doi.org/10.1590/0034-7167.2016690215i
3. Medeiros LS, Costa ACM. Período puerperal: a importância da visita domiciliar para enfermeiros da Atenção Primária à Saúde. Rev Rene [Internet]. 2016 [cited 2019 Oct 10]; 17(1):112-9. Available from: http://periodicos.ufc.br/rene/article/view/2622
4. Miranda DB, Marostica FC, Matão MEL. Influência do fator cultural no processo de cuidado puerperal. Rev eletr gestão saúde [Internet]. 2015 [cited 2019 Oct 8];6(3):2444-59. Available from: https://dialnet.unirioja.es/servlet/articulo?codigo=5555805
5. Henderson J, Alderdice F, Redshaw M. Factors associated with maternal postpartum fatigue: an observation al study. BMJ Open. 2019;9(7):e025927. DOI: http://dx.doi.org/10.1136/bmjopen-2018-025927
6. Johnson PD, Duzyj CM, Howell EA, Janevic T. Patient and hospital characteristics associated with severe maternal morbidity among postpartum readmissions. J Perinatol. 2019;39(9):1204-12. DOI: https://doi.org/10.1038/s41372-019-0426-6
7. Brasil. Ministério da Saúde. Cadernos de Atenção Básica: atenção ao pré-natal de baixo-risco [Internet]. Brasília (DF); 2012 [cited 2019 Oct 10]. Available from: https://bvsms.saude.gov.br/bvs/publicacoes/cadernos_atencao_basica_32_prenatal.pdf
8. Paraná. Secretaria de Estado da Saúde do Paraná. Linha guia: Rede Mãe Paranaense [Internet]. 7a ed. Curitiba 2018 [cited 2019 Oct 10]. Available from: http://www.saude.pr.gov.br/arquivos/File/LinhaGuiaMaeParanaense_2018.pdf
9. Pito ALBS. Epidemiologia aplicada nos serviços de saúde. São Paulo: Martinari; 2012.
10. Gomes GF, Santos APV. Assistência de enfermagem no puerpério. Rev enferm contemp. 2017;6(2):211-20. DOI: 10.17267/2317-3378rec.v6i2.1407
11. Guerreiro EM, Rodrigues DP, Queiroz ABA, Ferreira MA. Educação em saúde no ciclo gravídico-puerperal: sentidos atribuídos por puérperas. Rev bras enferm. 2014;67(1):13-21. DOI: 10.5935/0034-7167.20140001

12. Frota MA, Lopes MF, Lima KF, Sales COCB, Silva CAB. Interfaces of the discontinuation of breastfeeding. Acta sci, Health sci. 2016;38(1):33-8. DOI: https://doi.org/10.4025/actascihealthsci.v38i1.28514

13. Monteiro TLVA, Silva RC, Sousa GC, Neiva MJLM. Eventos de infecção puerperal em uma maternidade de referência no município de Caxias, Maranhão. Rev enferm UFPI [Internet]. 2016 [cited 2019 Sep 29];5(2):11-15. Available from: https://revistas.ufpi.br/index.php/reufpi/article/view/5110/pdf

14. Skupien SV, Ravelli APX, Acauan LV. Consulta puerperal de enfermagem: prevenção de complicações mamárias. Cogitare enferm [Internet]. 2016 [cited 2019 Oct 1];21(2):1-6. Available from: http://www.redalyc.org/jatsRepo/4836/483653650019/483653650019.pdf

15. Rocha GM, Cordeiro RC. Assistência domiciliar puerperal de enfermagem na estratégia saúde da família: intervenção precoce para promoção da saúde. Rev Uni Vale Rio Verde. 2015;13(2):483-93. DOI: http://dx.doi.org/10.5892/ruvrd.v13i1.2345

16. Lima THB, Amorim MM, Buainain Kassar S, Katz L. Maternal near miss determinants at a maternity hospital for high-risk pregnancy in northeastern Brazil: a prospective study. BMC Pregnancy Childbirth. 2019;19(1):271. DOI: https://doi.org/10.1186/s12884-019-2381-9

17. Bakker M, van der Beek AJ, Hendriksen IJM, Bruinvels DJ, van Poppel MN. Predictive factors of postpartum fatigue: a prospective cohort study among workingwomen. J Psychosom Res. 2014;77(5):385-90. DOI: https://doi.org/10.1016/j.jpsychores.2014.08.013

18. Doering JJ, Sims DA, Miller DD. How postpartum women with depressive symptoms manage sleep disruption and fatigue. Res nurs health. 2017;40(2):132-42. DOI: https://doi.org/10.1002/nur.21782

19. Van Der Woude D, Pijnenborg JMA, Verzijl JM, Van Wijk EM, De Vries J. Health status and fatigue of postpartum anemic women: a prospective cohort study. Eur J Obst Gynecol Reprod Biol. 2014;181:119-23. DOI: https://doi.org/10.1016/j.ejogrb.2014.07.028

20. Lai YL, Hung CH, Stocker J, Chan TF, Liu Y. Postpartum fatigue, baby-care activities, and maternal–infant attachment of vaginal and cesarean births following rooming-in. Appl nurs res. 2015;28(2):116-20. DOI: https://doi.org/10.1016/j.apnr.2014.08.002

21. Mori E, Tsuchiya M, Maehara K, Iwata H, Sakajo A, Tamakoshi K. Fatigue, depression, maternal confdence, and maternal satisfaction during the first month postpartum: a comparison of Japanese mothers by age and parity. Int J Nurs Prac. 2017;23(1):e12508. DOI: https://doi.org/10.1111/ijn.12508

22. Doering JJ, Dogan S. A postpartum sleep and fatigue intervention feasibility pilot study. Behav Sleep Med. 2018;16(2):185-201. DOI: https://doi.org/10.1080/15402002.2016.1180523

23. Andrade RD, Santos JS, Maia MAC, Mello DF. Fatores relacionados à saúde da mulher no puerpério e repercussões na saúde da criança. Esc Anna Nery. 2015;19(1):181-6. DOI: http://dx.doi.org/10.5935/1414-8145.20150025

24. Giallo R, Gartland D, Woolhouse H, Brown S. Differentiating maternal fatigue and depressive symptoms at six months and four years postpartum: considerations for assessment, diagnosis and intervention. Midwifery. 2015;31(2):316-22. DOI: https://doi.org/10.1016/j.midw.2014.09.005

25. Teixeira E, Martins TDR, Miranda PO, Cabral BG, Silva BAC, Rodrigues LSS. Tecnologia educacional sobre cuidados no pós-parto: construção e validação. Rev baiana enferm. 2016;30(2):1-10. DOI: http://dx.doi.org/10.18471/rbe.v30i2.15358

Received: March 6, 2020

Approved: April 3, 2020

Published: April 28, 2020