QUALITY OF PRENATAL CARE IN THE UNIFIED HEALTH SYSTEM
QUALIDADE DA ASSISTÊNCIA PRÉ-NATAL NO SISTEMA ÚNICO DE SAÚDE
CALIDAD DE LA ASISTENCIA PRENATAL EN EL SISTEMA ÚNICO DE SALUD

Diego da Silva Dantas¹, Rosemar Barbosa Mendes², José Marcos de Jesus Santos³, Thiago dos Santos Valença⁴, Claudiane Mahl⁵, Maria do Socorro Claudino Barreiro⁶

ABSTRACT

Objective: To evaluate the quality of prenatal care based on the Prenatal and Birth Humanization Program. **Method:** Quantitative and cross-sectional study conducted with 260 puerperal women who underwent prenatal care in the Unified Health System of Lagarto, State of Sergipe, Brazil. The data were obtained through interviews and prenatal records. The statistical analysis was performed using the SPSS 20.0 software. **Results:** A little more than half of the puerperal women had initiated prenatal care before the 16th gestational week and had also attended six or more consultations (66.9%, n = 174, each variable). Only 41.5% (n = 108) of the participants received information about reference maternities for childbirth, and 42.7% (n = 111) about activities to facilitate childbirth. Regarding the exams, there was high coverage in the first trimester, with a slight reduction in the third. **Conclusion:** Prenatal care provided to users of the Unified Health System of Lagarto was inadequate with respect to the recommendations of the Prenatal and Birth Humanization Program, since there was evidence of late initiation of prenatal care, insufficient number of consultations, few guidelines, and unsatisfactory performance of the exams recommended by the Ministry of Health. **Descriptors:** Maternal Health; Pregnancy; Pregnant Women; Prenatal Care; Maternal and Child Health; Humanization of Assistance.

RESUMO

Objetivo: Avaliar a qualidade da assistência pré-natal a partir do Programa de Humanização no Pré-Natal e Nascimento. **Método:** Estudo quantitativo, transversal, com 260 puérperas que realizaram o acompanhamento pré-natal no Sistema Único de Saúde em Lagarto, Estado de Sergipe, Brasil. As informações foram obtidas por meio de entrevistas e visualização do cartão de pré-natal. A análise estatística foi realizada no software SPSS 20.0. **Resultados:** Pouco mais da metade das puérperas haviam iniciado seu acompanhamento pré-natal antes da 16^a semana gestacional e também realizaram seis ou mais consultas (66,9%; n = 174, cada variável). Somente 41,5% (n = 108) das participantes receberam informações sobre a maternidade de referência para o parto e 42,7% (n = 111) sobre as atividades para facilitar o parto. Quanto aos exames, foi identificada elevada cobertura no primeiro trimestre, com discreta redução no terceiro. **Conclusão:** A assistência pré-natal oferecida às usuárias do SUS de Lagarto se mostrou inadequada às recomendações do Programa de Humanização no Pré-Natal e Nascimento, pois foi evidenciado o início tardio, número insuficiente de consultas, poucas orientações e cobertura insatisfatória dos exames preconizados pelo Ministério da Saúde. **Descritores:** Saúde Materna; Gravidez; Gestantes; Cuidado Pré-Natal; Saúde Materno-Infantil; Humanização da Assistência.

RESUMEN

Objetivo: Evaluar la calidad de la asistencia prenatal a partir del Programa de Humanización en Prenatal y Nacimiento. **Método:** Estudio cuantitativo y transversal conducido con 260 puérperas que realizaron cuidado prenatal en el Sistema Único de Salud en Lagarto, Estado de Sergipe, Brasil. La información fue obtenida por medio de entrevistas y expedientes de prenatal. El análisis estadístico se realizó en el software SPSS 20.0. **Resultados:** Poco más de la mitad de las puérperas habían iniciado cuidado prenatal antes de la 16^a semana gestacional y también realizaron seis o más consultas (66,9%, n = 174, cada variable). Sólo el 41,5% (n = 108) de las participantes recibieron información sobre la maternidad de referencia para el parto y el 42,7% (n = 111) sobre las actividades para facilitar el parto. En cuanto a los exámenes, se observó una elevada cobertura en el primer trimestre, con discreta reducción en el tercero. **Conclusión:** La asistencia prenatal ofrecida a las usuarias del Sistema Único de Salud de Lagarto fue inadecuada con respecto a las recomendaciones del Programa de Humanización en Prenatal y Nacimiento, pues se evidenció inicio tardío, número insuficiente de consultas, pocas orientaciones y cobertura insatisfactoria de los exámenes preconizados por el Ministerio de Salud. **Descriptores:** Salud Materna; Embarazo; Mujeres Embarazadas; Cuidado Prenatal; Salud Materno-Infantil; Humanización de la Asistencia.

¹Nurse, Federal University of Sergipe (UFS), Prof. Antônio Garcia Filho Campus. Lagarto, SE, Brazil. E-mail: souufs.com@hotmail.com ORCID iD: <http://orcid.org/0000-0003-1929-4718>; ²Ph.D., Nursing Department, Federal University of Sergipe (UFS). São Cristóvão, SE, Brazil. E-mail: rosemarbm@uol.com.br ORCID iD: <http://orcid.org/0000-0002-4860-7413>; ^{3,4}Nursing undergraduate students, Federal University of Sergipe (UFS), Prof. Antônio Garcia Filho Campus. Lagarto, SE, Brazil. E-mail: jsmarcos.ufs@hotmail.com ORCID iD: <http://orcid.org/0000-0001-5122-1469>; E-mail: thiagovalenca.valena77@gmail.com ORCID iD: <http://orcid.org/0000-0003-4554-8494>; ⁵Master's degree holder, Nursing Department, Federal University of Sergipe (UFS), Prof. Antônio Garcia Filho Campus. Lagarto, SE, Brazil. E-mail: profclaudianem30@gmail.com ORCID iD: <http://orcid.org/0000-0003-2021-026X>; ⁶Ph.D., Nursing department, Federal University of Sergipe (UFS) Prof. Antônio Garcia Filho Campus. Lagarto, SE, Brazil. E-mail: socorro_claudino@hotmail.com ORCID iD: <http://orcid.org/0000-0001-9823-4638>

INTRODUCTION

Prenatal care includes a set of actions to health promotion and prevention, as well as diagnosis and appropriate treatment of problems that may occur during the pregnancy-puerperal cycle.¹ This is an important strategy to reduce maternal and neonatal morbimortality² and, therefore, it should be performed in an individualized manner to ensure the quality of care for women and their conceptuses.³

In Brazil, although the latest report on the maternal mortality ratio provided by the World Health Organization showed a reduction in the number of these deaths from 1990 to 2015,⁴ it is worth noting that the country did not reach the fifth goal of the Millennium Development Goals, which advocated a reduction of ¾ in the maternal mortality ratio during the same period.⁵

It is worth mentioning that, in order to improve the indicators, the Ministry of Health, through the Prenatal and Birth Humanization Program, determines the accomplishment of some basic procedures that should be provided to all Brazilian pregnant women, namely: (a) initiation of prenatal care until the 16th gestational week; (b) attendance to at least six consultations, preferably one during the first trimester, two during the second, and three during the third; (c) performance of routine laboratory exams and vaccination; (d) educational activities related to pregnancy and parturition, and also to the constitution of maternity; and (e) puerperal consultations.⁶

Despite the recommendations, it is known that prenatal care usually occurs in a deficient manner, both in the provision of the recommended procedures and the way in which they are performed by health professionals.⁷ In this sense, it is important to emphasize that, many times, prenatal care represents the first contact of these women with health services, which raises the need for greater organization to adequately meeting their real needs, using the best technical-scientific knowledge and resources made available by the Ministry of Health.⁸

Therefore, given the scarcity of studies assessing the quality of prenatal care in the public services of Brazil, it is believed that the present study can contribute to determining care deficiencies in this important gestational follow-up.

OBJECTIVE

- To assess the quality of prenatal care provided to users of the Unified Health System

(UHS), based on the Prenatal and Birth Humanization Program.

METHOD

This is a quantitative and cross-sectional study conducted between November 2016 and April 2017 with 260 puerperal women who underwent prenatal care at the UHS in Lagarto, State of Sergipe, Brazil. The study population consisted of 495 women based on the 2015 maternity records book used to conduct the study. Sample calculation was performed using Barbetta's formula (2011).⁹ We considered 95% confidence level, and 5% safety margin was added to the sample number for any withdrawals during the survey, which resulted in 260 subjects.

The puerperal women were selected by simple random sampling from a list of daily hospitalization. We considered illegible those women residing in Lagarto who underwent prenatal care at the UHS and whose deliveries included live or dead fetuses with birth weight greater than or equal to 500 g and/or gestational age greater than or equal to 22 weeks.

To collect the data, we performed face-to-face interviews with the puerperal women, with a minimum interval of six hours after delivery, and used the participants' prenatal records. The questionnaire used in the present study was adapted from the Birth in Brazil enquiry,¹⁰ composed of sociodemographic maternal data, prenatal characteristics, and some spaces for collecting information from the pregnant woman's medical records.

The data was entered into the Microsoft Excel program (2010) and imported into the IBM® SPSS software (Statistical Package for the Social Sciences) version 20.0, in which they were analyzed. For the statistical analysis, we used univariate and bivariate techniques to obtain the distribution of absolute and relative frequency values. Pearson's chi-square test of independence was also used to determine the associations between categorical variables. We used Fisher's exact test for the categories with low frequency. Odds Ratio (OR) was also estimated as a measure of association and respective 95% confidence intervals (95% CI) using the Mantel-Haenzel method. In all cases we adopted 5% significance.

This study is linked to the Birth Project on the Path of Humanization, with approval by the Research Ethics Committee of the Federal University of Sergipe, under Opinion No. 1,287,012 (CAAE: 48582015.8.0000.5546). The researchers followed the guidelines and regulatory standards recommended in

Resolution No. 466/12 of the National Health Council relating to research involving human beings.

RESULTS

The 260 eligible and randomly selected puerperal women who underwent prenatal care in the UHS of Lagarto were interviewed, and there were not losses nor withdrawals during the study. The mean age of participants was 24.8 years (standard deviation = 6.4), 20.2% (n = 54) were adolescents and 8.5% (n = 22) were aged ≥35 years. The mestizo race was the most reported (59.2%; n = 154), with whites and blacks corresponding to 39.6% (n = 103) and 0.4% (n = 1) of the total sample, respectively. The majority lived in urban areas (74.6%, n = 194), at own dwellings (76.2%, n = 198), had attended primary education (65.4%, n = 170), did not work (58, 5%, n = 152), lived with a partner (81.2%, n = 211), were multiparas (62.7%, n = 163), had individual income lower than a minimum wage (54.6%; n = 142) and family income between one and three minimum wages at the time of the survey (67.7%; n = 176). A little more than half of the puerperal women had planned the current pregnancy (50.8 %; n = 132), and 19.6% (n = 51) revealed a feeling of dissatisfaction when they knew that they were pregnant, in addition to 3.1% (n = 8) who reported abortive attempts in this process (data not shown in the table).

A little more than half of the women interviewed had initiated prenatal care before the 16th gestational week (66.9%; n = 174), with a higher proportion among participants who were not at gestational age (OR: 2.08;

95% CI: 1.12-3.85), and primiparas (OR: 2.40, 95% CI: 1.34-4.27) who felt satisfied about pregnancy (OR: 1.90, 95% CI: 1.01-3.55). This early initiation of prenatal care was also less frequent among illiterate women or those who had attended primary education (OR: 0.52; 95% CI: 0.29-0.94; *p* <0.05). Regarding the number of consultations, 66.9% (n = 174) had attended the six minimum consultations recommended by the Ministry of Health and all received the prenatal card (Table 1).

It is worth mentioning that the proportion of women with early initiation of prenatal care and sufficient number of consultations was not in line with prenatal coverage, which indicates a late search for prenatal care and insufficient number of consultations. Women with higher schooling (OR: 3.02, 95% CI: 1.60-5.70) and who did not attempt to interrupt the pregnancy (OR: 3.41, 95% CI: 1.26-4.41) had attended a greater number of prenatal consultations, and this fact was less frequent among women who did not live with a partner (OR: 0.35, 95% CI: 0.18-0.66), multiparas (OR: 0.31, 95% CI: 0,17-0,58) and women unsatisfied with pregnancy (OR: 0.52, 95% CI: 0.28-0.98; *p* <0.05) (Table 1).

When we analyzed the continuity of prenatal care, it was observed that most of the women had been followed up by the same professionals throughout the gestational process (97.3%, n = 253), especially among those with higher family income (*p* = 0.013; *p* <0.05) (data not shown in the table).

Table 1. Proportional distribution of maternal characteristics according to early initiation of prenatal care and minimum number of consultations performed in a municipal sample of puerperal women (n = 260). Lagarto, State of Sergipe, Brazil, 2016/2017.

Maternal characteristics	Early initiation	<i>p</i> value	OR (95% CI)	Six or more consultations	<i>p</i> value	OR (95% CI)
Age (years)						
≤19 or ≥35	77.6	0.018	2.08 (1.12-3.85)	68.4	0.741	0.90 (0.51-1.60)
Between 20 and 34	62.5			66.3		
Race						
White	67	0.928	0.97 (0.57-1.66)	66	0.717	1.10 (0.64-1.87)
Mestizo	67.5			68.2		
Education						
Illiterate and Primary Education	62.3	0.030	0.52 (0.29-0.94)	60	<0.001	3.02 (1.60-5.70)
Secondary and Higher Education	75.9			81.9		
Lives with a partner						
No	55.1	0.051	1.87 (0.99-3.53)	46.9	0.001	0.35 (0.18-0.66)
Yes	69.7			71.6		
Family income						
<1 MW	72.3	0.208	1.44 (0.81-2.55)	68.7	0.681	0.88 (0.50-1.55)
≥1 MW	64.4			66.1		
Residential area						
Rural	71.2	0.391	1.30 (0.70-2.40)	68.2	0.801	0.92 (0.50-1.68)
Urban	65.5			66.5		
Number of pregnancies						

Primipara	78.4	0.003	2.40 (1.34-4.27)	81.4	<0.001	0.31 (0.17-0.58)
Multipara	60.1			58.3		
Planned pregnancy						
Yes	68.2	0.661	1.12 (0.66-1.88)	69.7	0.334	0.77 (0.46-1.30)
No	65.6			64.1		
Feeling toward pregnancy						
Satisfied	69.9	0.042	1.90 (1.01-3.55)	69.9	0.042	0.52 (0.28-0.98)
Unsatisfied	54.9			54.9		
Abortion attempt						
Yes	37.5	0.074*	0.28 (0.06-1.22)	25	0.018*	3.41 (1.26-4.41)
No	67.7			68.1		
Total (%)	66.9			66.9		

Note: MW = Minimum wage; *p* = Chi-square or *Fisher's exact test; OR = Odds ratio; 95% CI = 95% confidence interval.

It was observed that almost all the consultations had occurred in basic health units (99.2%, *n* = 258). These consultations were performed in an intercalated manner by physicians and nurses (67.7%; *n* = 176), the latter being more frequent among multipara women (OR: 2.36, 95% CI: 1.38-4.04), and less frequent among those unsatisfied with pregnancy (OR: 0.45, 95% CI: 0.24-0.84; *p* <0.05) (Table 2).

Regarding guidelines, few women were informed about activities to facilitate delivery (42.7%, *n* = 111). The highest proportions of guidelines during prenatal care were related to breastfeeding (95%, *n* = 247), clinical changes that would indicate pregnancy risk

(78.5%, *n* = 204), and signs of labor onset (76.5%, *n* = 199) (data not shown in the table).

Less than half of the interviewees received information about reference maternities for delivery during prenatal care (41.5%; *n* = 108). Women who lived in rural areas corresponded to the those who had received more guidance (OR: 2.21, 95% CI: 1.25-3.89), and this guidance was less frequent among those with a family income <1 minimum wage (OR: 0.45, 95% CI 0.25-0.78), those who had planned the pregnancy (OR: 0.50, 95% CI: 0.30-0.82), and those who were satisfied when they knew that they were pregnant (OR: 0.37, 95% CI: 0.20-0.70; *p* <0.05) (Table 2).

Table 2. Proportional distribution of maternal characteristics according to guidance on reference maternities for delivery and prenatal care provided by nurses and physicians in a municipal sample of puerperal women (*n* = 260). Lagarto, State of Sergipe, Brazil, 2016/2017.

Maternal characteristics	Information about reference maternities	<i>p</i> value	OR (95% CI)	Prenatal car with nurses and physicians	<i>p</i> value	OR (95% CI)
Age (years)						
≤19 or ≥35	40.8	0.875	0.95 (0.55-1.64)	64.5	0.476	1.22 (0.69-2.15)
Between 20 and 34	41.8			69		
Race						
White	45.6	0.338	1.28 (0.77-2.11)	64.1	0.309	1.31 (0.77-2.23)
Mestizo	39.6			70.1		
Education						
Illiterate and Primary Education	40.6	0.670	0.89 (0.52-1.51)	69.1	0.512	0.83 (0.47-1.44)
Secondary and Higher Education	43.4			65.1		
Lives with a partner						
No	36.7	0.449	1.28 (0.67-2.43)	63.3	0.462	0.78 (0.40-1.50)
Yes	42.7			68.7		
Family income						
<1 MW	28.9	0.005	0.45 (0.25-0.78)	68.7	0.817	0.93 (0.53-1.63)
≥1 MW	47.5			67.2		
Residential area						
Rural	56.1	0.006	2.21 (1.25-3.89)	62.1	0.263	1.39 (0.77-2.50)
Urban	36.6			69.6		
Number of pregnancies						
Primipara	36.1	0.168	0.69 (0.41-1.16)	55.7	0.001	2.36 (1.38-4.04)
Multipara	44.8			74.8		
Planned pregnancy						
Yes	33.3	0.006	0.50 (0.30-0.82)	69.7	0.483	0.83 (0.49-1.39)
No	50			65.6		
Feeling toward pregnancy						
Satisfied	36.8	0.002	0.37 (0.20-0.70)	71.3	0.012	0.45 (0.24-0.84)
Unsatisfied	60.8			52.9		
Abortion attempt						
Yes	62.5	0.284*	2.39 (0.56-10.2)	62.5	0.717*	1.25 (0.29-5.39)
No	41			67.7		

Total (%)	41.5	67.7
-----------	------	------

Note: MW = Minimum wage; *p* = Chi-square or *Fisher's exact test; OR = Odds ratio; 95% CI = 95% confidence interval.

Table 3 presents the descriptive results regarding the performance of the exams during the first and third trimesters of pregnancy. It was observed that there was high coverage during the first trimester, with a slight reduction in the third, especially in the urine and VDRL exams. The most frequent tests during the first trimester were: urine (95.8%; *n* = 249); fasting glycaemia (89.6%; *n* = 233); Hb/Ht; anti-HIV; and VDRL (88.5%, *n* = 230, each). During the third trimester, the most frequent tests were: anti-HIV (92.3%, *n* = 240), fasting glycaemia (89.2%, *n* = 232) and HBsAg (83.5%; *n* = 217). Only two women from the sample had not performed ultrasonography in this process.

Table 3. Descriptive results regarding the performance of the examinations recommended by the Ministry of Health for the first and third trimesters of pregnancy (*n* = 260). Lagarto, State of Sergipe, Brazil, 2016/2017.

Exam	Performed in the first trimester		Performed in the third trimester	
	N	%	N	%
ABO-Rh	222	85.4	-	-
Hb/Ht	230	88.5	-	-
Fasting glycaemia	233	89.6	232	89.2
Toxoplasmosis	216	83.1	-	-
Urine test	249	95.8	198	76.2
Uroculture	207	79.6	186	71.5
Anti-HIV	230	88.5	240	92.3
VDRL	230	88.5	212	81.5
HBsAG	200	76.9	217	83.5
COOMBS	58	22.3	-	-
GGPD	47	18.1	-	-

Note: N = Absolute frequency; % = Relative frequency.

DISCUSSION

Prenatal care among users of the UHS exhibited several problems related to adequacy to the recommendations of the Prenatal and Birth Humanization Program.⁶ The main deficiencies found in the present study were late initiation of prenatal care, insufficient number of consultations, few guidelines, and unsatisfactory coverage of the exams recommended by the Ministry of Health for the third trimester of pregnancy. This is a situation similar to that found in a national study with a similar methodological outline.⁷

Women with low education, without partners, who were multiparas and unsatisfied with pregnancy, exhibited the worst outcomes during prenatal care. This fact was also found in a study conducted in Pelotas, State of Rio Grande do Sul, Brazil, which assessed factors associated with absence of prenatal care.¹¹ Unplanned pregnancy and *per capita* income less than half a minimum wage are other maternal characteristics associated with prenatal inadequacy.¹² As a result, it is important to consider these characteristics in the planning of any maternal and child health actions, aiming at the inclusion of these women in prenatal care, both by central management and health teams.

It was observed that a little more than half of the puerperal women had planned the current gestation (50.8%) and 19.6% showed a feeling of dissatisfaction when they knew that

they were pregnant, in addition to 3.1% of them having reported abortive attempts in this process. A national study with a local approach showed that the factors associated with unplanned pregnancy were blacks/mestizos, aged less than 20 years, absence of partners, low family incomes, family agglomeration, smoking, and multiparity.¹³ It is worth mentioning that unplanned pregnancy is also associated with depressive symptoms after childbirth.

Only 66.9% of the interviewed women had initiated prenatal care before the 16th gestational week, and had also attended six or more consultations, with a lower relative frequency among participants who were at indicated gestational age, with low educational level, multiparas, and unsatisfied with the pregnancy. The late initiation of prenatal care and insufficient number of consultations increases the chance of premature births, in addition to favoring other deficiencies during this important follow-up.¹²

When we analyzed the continuity of prenatal care, it was noticed that most of the women had been followed up in an intercalated manner by physicians and nurses (67.7%) and this follow-up had been performed by the same professionals throughout the gestational process (97.3%). This fact facilitates the formation of health professional-patient bond and may eventually promote higher care quality.

Regarding the guidelines, the smallest proportions were related to activities performed to facilitate delivery (42.7%) and reference maternities for delivery (41.5%). These results are similar to those found in Brazil, whose percentages of these guidelines were 41.1% and 58.7%, respectively.⁷ It is worth noting that the lack of knowledge about reference maternities is one of the main causes for women to move from one health unit to another at the time of admission for childbirth.¹⁶

Women with a family income <1 minimum wage, living in urban areas, who had planned the current pregnancy and felt satisfied in this process were the ones who received the least information about reference maternities in the present study and, possibly, are the most subject to move from one health unit to another. It is pointed out that this fact can lead to risks of intercurrents, complications and even the death of pregnant women and/or their fetuses.^{17,18}

Regarding the exams, we found a high coverage during the first trimester, with a slight reduction in the third, especially in urine and VDRL tests. The most frequent tests in the first trimester were urine, fasting glycaemia, Hb/Ht, anti-HIV, and VDRL and, in the third trimester, the most frequent were anti-HIV, fasting glycaemia, and HBsAg. Only two women had not undergone ultrasonography during pregnancy. These results were better than those found in a study conducted in the Brazilian Midwest.¹⁹

It is known that the adequate request and interpretation of the results of prenatal examinations is an important way of monitoring women to determine their gestational risk. Therefore, this practice should be satisfactorily performed in all the follow-ups carried out in the public and private services of the country.²⁰

Finally, it should be pointed out that the limitation of the present study was related to the inclusion of puerperal women cared for at the UHS from only one city of the State of Sergipe, which contributed to a reduced sample number.

CONCLUSION

We observed unsatisfactory quality prenatal care provided to UHS users in the city of Lagarto, State of Sergipe, Brazil. The main deficiencies found were late initiation of prenatal care, insufficient number of consultations, few guidelines, and poor

coverage of the exams recommended by the Ministry of Health for the third trimester of pregnancy.

It is therefore noticed that there is a need for improvements in the performance of prenatal care provided by the health professionals of this city, given that the reduction of maternal and child morbimortality requires early initiation of prenatal care and quality obtained by using all the resources recommended and made available by the Ministry of Health.

This way, we believe that the present study contributed to the identification of prenatal care deficiencies and can serve as a basis for the formulation of effective strategies for health promotion and prevention during gestational follow-up.

REFERENCES

1. Brasil. Secretaria de Atenção à Saúde. Pré-natal e Puerpério: atenção qualificada e humanizada. Brasília, DF: Ministério da Saúde, 2006. 158 p.
2. Carroli G, Rooney C, Villar J. How effective is antenatal care in preventing maternal mortality and serious morbidity? An overview of the evidence. *Paediatric and Perinatal Epidemiology* [Internet]. 2001 [cited 2017 Dec 28];15(1):1-42. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/11243499>
3. Barreto CN, Ressel LB, Santos CC, Wilhelm LA, Silva SC, Alves CN. Prenatal care in the voice of pregnant women. *Rev enferm UFPE* [Internet]. 2013 [cited 2017 Dec 28];7(6):54-63. Available from: <http://www.revista.ufpe.br/revistaenfermage/index.php/revista/article/view/4355>
4. World Health Organization. Trends in Maternal Mortality: 1990 to 2015: estimates by WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division. Geneva: WHO, 2015. 38 p. Available from: http://whqlibdoc.who.int/publications/2010/9789241500265_eng.pdf
5. Programa das Nações Unidas para o Desenvolvimento no Brasil. Os Objetivos de Desenvolvimento do Milênio. PNUD, 2015. Available from: <http://www.br.undp.org/content/brazil/pt/home/post-2015/sdg-overview1/mdg5/>
6. Brasil. Portaria No 569/MS de 1o de Junho de 2000. Brasília, DF: Diário Oficial da União, 2000. Available from: http://bvsms.saude.gov.br/bvs/saudelegis/gm/2000/prt0569_01_06_2000_rep.html
7. Viellas EF, Augusto M, Dias B, Viana J, Bastos MH. Prenatal care in Brazil. *Cad Saude Publica* [Internet]. 2014 [cited 2017 Dec

- 28];30:85-100. Available from: http://www.scielo.br/pdf/csp/v30s1/en_0102-311X-csp-30-s1-0085.pdf
8. Pessoa IN, Menezes ED, Ferreira TF, Dotto LMG, Bessa LF. Percepção de puérperas sobre assistência de enfermagem na gravidez. *Ciênc Cuid Saúde* [Internet]. 2009 [cited 2017 Dec 28];8(2):236-41. Available from: <http://periodicos.uem.br/ojs/index.php/CienCuidSaude/article/view/8204/4596>
9. Barbetta PA. Estatística aplicada às ciências sociais. 7ª ed. Santa Catarina: UFSC, 2011. 340 p.
10. Fiocruz. Pesquisa Nascer no Brasil: Inquérito Nacional sobre Parto e Nascimento. Available from: <http://www6.ensp.fiocruz.br/nascerbrasil/questionarios-eletronicos/>
11. Rosa CQ, Silveira DS, Costa JSD. Factors associated with lack of prenatal care in a large municipality. *Rev Saude Publica* [Internet]. 2014 [cited 2017 Dec 28];48(6):977-84. Available from: <http://www.scielo.br/pdf/rsp/v48n6/0034-8910-rsp-48-6-0977.pdf>
12. Melo EC, Oliveira RR, Mathias TAF. Factors associated with the quality of prenatal care: an approach to premature birth. *Rev Esc Enferm USP* [Internet]. 2015 [cited 2017 Dec 28];49(4):540-9. Available from: <http://www.scielo.br/pdf/reeusp/v49n4/0080-6234-reeusp-49-04-0540.pdf>
13. Prietsch SOM, González-Chica DA, Cesar JA, Mendoza-Sassi RA. Unplanned pregnancy in Southern Brazil: prevalence and associated factors. *Cad Saude Publica* [Internet]. 2011 [cited 2017 Dec 28];27(10):1906-16. Available from: <http://www.scielo.br/pdf/csp/v27n10/04.pdf>
14. Brito CNO, Alves SV, Luderhirr AB, Araújo TVB. Postpartum depression among women with unintended pregnancy. *Rev Saúde Pública* [Internet]. 2015 [cited 2017 Dec 28];49:33. Available from: <https://www.scielosp.org/pdf/rsp/2015.v49/33/en>
15. Vilarinho LM, Nogueira LT, Nagahama EEI. Avaliação da qualidade da atenção à saúde de adolescentes no pré-natal e puerpério. *Esc Anna Nery* [Internet]. 2012 [cited 2017 Dec 28];16(2):312-9. Available from: <http://www.scielo.br/pdf/ean/v16n2/15.pdf>
16. Domingues RMSM, Viellas EF, Dias MAB, Torres JA, Theme-Filha MM, Gama SGN, et al. Adequação da assistência pré-natal segundo as características maternas no Brasil. *Rev Panam Salud Publica* [Internet]. 2015 [cited 2017 Dec 28];37(3):140-7. Available from: <http://www.scielosp.org/pdf/rpsp/v37n3/v37n3a03.pdf>

17. Silva ALS, Almeida LCG. Vivência de mulheres frente à peregrinação para o parto. *Rev Eletrôn Atualiza Saúde* [Internet]. 2015 [cited 2017 Dec 28];2(2):07-19. Available from: <http://atualizarevista.com.br/wp-content/uploads/2015/07/Viv%C3%Aancia-de-mulheres-frente-%C3%A0-peregrina%C3%A7%C3%A3o-para-o-parto-v.2-n.2.pdf>
18. Batista CB, Carvalho ML, Vasconcelos AGG. Access to and use of health services as factors associated with neonatal mortality in the North, Northeast, and Vale do Jequitinhonha regions, Brazil. *J Pediatr (Rio J)* [Internet]. 2017 [cited 2017 Dec 28];16:1-7. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/28802823>
19. Handell IBS, Cruz MM, Santos MA. Avaliação da assistência pré-natal em unidades selecionadas de Saúde da Família de município do Centro-Oeste brasileiro, 2008-2009. *Epidemiol. Serv. Saúde* [Internet]. 2014 [cited 2017 Dec 28];23(1):101-110. Available from: <http://scielo.iec.gov.br/pdf/ess/v23n1/v23n1a10.pdf>
20. Paris GF, Pelloso SM, Martins PM. Qualidade da assistência pré-natal nos serviços públicos e privados. *Rev Bras Ginecol Obs.* [Internet]. 2013 [cited 2017 Dec 28];35(10):447-52. Available from: <http://www.scielo.br/pdf/rbgo/v35n10/04.pdf>

Submission: 2017/10/23

Accepted: 2018/03/23

Publishing: 2018/05/01

Corresponding Address

José Marcos de Jesus Santos
 Av. Governador Marcelo Déda Chagas, 13
 Bairro São José
 CEP: 49400-000 – Lagarto (SE), Brazil