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OBSTETRIC FACTORS ASSOCIATED WITH BIRTH WEIGHT OF NEWBORN AT TERM NOT GEMELAR

FATORES OBSTÉTRICOS ASSOCIADOS AO PESO AO NASCER DO RECÉM-NASCIDO A TERMO NÃO GEMELAR

FACTORES OBSTÉTRICOS ASOCIADOS CON PESO AL NACER DEL RECIÉN NACIDO A TÉRMINO NO GEMELAR

Maria Aline Rodrigues Barros[1], Maria Aline Gonçalves de Holanda[2], Karoana Rocha Lopes[3], Ana Izabel Oliveira Nicolau[4]

ABSTRACT

Objective: to investigate the influence of obstetric factors of the mother on the weight of the newborn. ***Method:*** a descriptive study with a quantitative approach, performed with 120 postpartum women and newborns hospitalized in a public hospital of the macro-region of Picos/Piauí, Northeastern Brazil, from June to August 2011. The data collection was by means of a questionnaire. On statistical analysis were employed initially simple frequency tables, in order to characterize the sample. Secondly, we used the Chi-square Test. The significance level was 0,05 (5%) to reject the null hypothesis. The study was the research project approved by the Ethics Committee in Research, CAAE: 0092.0.045.000-11. ***Results:*** it was found that only gestational age was associated with low birth weight. ***Conclusion:*** The quality of health services should improve, emphasizing the need for regional public policies, with emphasis on promotion and health education. ***Descriptors:*** Newborn; Birthweight; Prenatal.

RESUMO

Objetivo*:** averiguar a influência dos fatores obstétricos da gestante sobre o peso do recém-nascido. ***Método*:** estudo descritivo, com abordagem quantitativa, realizado com 120 puérperas e os recém-nascidos internados em um hospital público de referência da macrorregião de Picos/PI, Nordeste do Brasil, meses de junho a agosto de 2011. A coleta de dados foi por meio de um questionário. Na análise estatística empregaram-se, inicialmente, tabelas de frequências simples, no sentido de caracterizar a amostra. No segundo momento, utilizou-se o teste Qui-quadrado de Pearson. O nível de significância foi de 0,05 (5%) para rejeição da hipótese nula. O estudo teve o projeto de pesquisa aprovado pelo Comitê de Ética em Pesquisa, CAAE: 0092.0.045.000-11. ***Resultados*:** verificou-se que apenas a idade gestacional esteve associada com o baixo peso ao nascer. ***Conclusão*:** a qualidade dos serviços de saúde deve melhorar, destacando-se a necessidade de políticas públicas regionais, com ênfase na promoção e educação em saúde. ***Descritores: Recém-Nascido; Peso ao Nascer; Pré-Natal.

RESUMEN

Objetivo: investigar la influencia de los factores obstétricos de la madre sobre el peso del recién nacido. ***Método:*** se realizó un estudio descriptivo, con abordaje cuantitativo, realizado con 120 mujeres puérperas y recién nacidos hospitalizados en un hospital público de la macro-región de Picos/Piauí, Noreste de Brasil, de junio a agosto de 2011. La recolección de datos fue por medio de un cuestionario. En el análisis estadístico se empleó, inicialmente, tablas de frecuencia simples, con el fin de caracterizar la muestra. En segundo lugar, se utilizó la prueba de Chi-cuadrado. El nivel de significación fue de 0,05 (5%) para rechazar la hipótesis nula. El estudio tuvo el proyecto de investigación aprobado por el Comité de Ética en Investigación, CAAE: 0092.0.045.000-11. ***Resultados:*** se encontró que sólo la edad gestacional se asocia con el bajo peso al nacer. ***Conclusión:*** La calidad de los servicios de salud debe mejorar, haciendo hincapié en la necesidad de una política pública regional, con énfasis en la promoción y educación para la salud. ***Descriptores:*** Recién Nacido; Peso al Nacer; Prenatal.

[1]Undergraduate Student of Nursing, Federal University of Piauí/UFPI. Picos (Piauí), Brazil. E-mail: alinebarrosufpi@hotmail.com; [2]Undergraduate Student of Nursing, Federal University of Piauí/UFPI. Picos (PI), Brazil. E-mail: alineholanda82@hotmail.com; [3]Undergraduate Student of Nursing, Federal University of Piauí/UFPI. Picos (PI), Brazil. E-mail: karoana.rocha@hotmail.com; [4]Nurse, Master Teacher in Nursing, PhD Student in Nursing, Graduate Program in Nursing, Federal University of Ceará/PPGEN/UFC. Fortaleza (CE), Brazil. E-mail: anabelpet@yahoo.com.br

INTRODUCTION

The prenatal care quality is key to reducing maternal and perinatal mortality.[1] Ensure adequate care means preventing, diagnosing and treating adverse events during pregnancy, for the well-being of the mother and fetus, and steer to avoid specific problems of childbirth, or even certain immediate care to the newborn.[1] However, prenatal consultations should be initiated as soon as possible so that the necessary tests will ensure the health of the mother and baby, as well as detection of disease or dysfunction, if any.[2]

During prenatal care should be provided to physical and psychological preparation for childbirth and motherhood and, as such, is a time of intense learning and opportunity for the professionals of the healthcare team to develop education as a dimension of caring.[3] The main aim of the assistance is to ensure the health of the mother and baby throughout the pregnancy period and delivery, identifying situations that may increase the risk of adverse outcomes.[4] Thus, the approach of each woman has to be based on the risk of pregnancy, the characteristics of the screened population, the prevalence of the most common diseases and the evaluation of available evidence.[4] Therefore, it is necessary for prenatal visits have their beginning as early so that risks are minimized, thereby improving the quality of life of both mother and child.

Pregnant women attending the service of attention to prenatal care have fewer illnesses and their children have better intrauterine growth, less perinatal and infant mortality.[5] Thus, it is recommended to start prenatal care as soon as pregnancy is diagnosed aiming to strengthen the accession of women to prenatal diagnosis and possible risk factors, 6 given that birth weight is an indicator that reflects the gestational conditions and development during the fetal period.[7]

The Ministry of Health recommends that the appropriate number of prenatal visits must be greater than or equal to six, [8] whereas the completion of seven or more prenatal visits as an indicator of adequate access to health services, low coverage may reflect the difficulty in accessing health services and greater likelihood of health risks to the mother and the neonate.[9]

In Brazil, poor perinatal situation is related to access to prenatal care and childbirth, and highlighted the difficulties imposed socially to the mother , preventing her from attending prenatal care within appropriate conditions.[10] It can be seen that the lower the birth weight increases the risk of illness and death in the neonatal period.

During the prenatal health professionals have the opportunity to detect all risk factors for low birth weight and pre-gestational maternal diseases, preeclampsia, smoking and alcohol use, among others.

The determination of the risk factors involved in the recurrence of low birth weight is an important step in the attempt to break the causal chain that makes mothers vulnerable to the occurrence of this outcome.[11] Specifically, prenatal care allows the diagnosis and treatment of complications during pregnancy and reduction or elimination of risk factors and behaviors that can be corrected.[12]

Given the problems that low birth weight can bring the child throughout his life and its determinants can be biological, social and environmental which women are exposed during pregnancy. So this study is justified by showing the importance of conducting prenatal correctly, because that is when the health care professional can detect any complication and formulate strategies to address the problem as early as possible.

The contribution is that the study is the need for the reduction of maternal and neonatal deaths, given that many complications during pregnancy and childbirth could be avoided if these women have made a prenatal quality. It is expected that, knowing such a situation, one can effectively plan a tour that includes actions to improve the quality of prenatal care, and consequently decrease the risk of problems for both mother and child.

The aim of this study is to investigate the influence of obstetric factors on the weight of the mother of the newborn.

METHOD

This is a descriptive study with a quantitative approach. The population consisted of 120 mothers and their newborns admitted to a public hospital of reference for the health care of the macro-region of Picos/PI, Northeast Brazil. The study took place in the months from June to August 2011.

As inclusion criteria there was used the following parameters: age over 18 years old, being a postpartum fetus to term non gemelar and of exclusion were elected: some cognitive limitation that prevented the interview, risk pregnancies and childbirth complications. At the end of the show consisted of all

postpartum women who were according to the inclusion criteria and agreed to participate in the research during the collection period of the study, obtaining a total of 120 patients.

For data collection there was used a questionnaire with the following variables: number of queries, the first query execution, number of births, gestational age, type of birth, height, weight and sex of the newborn, use of tobacco and alcohol during gestation. All participants were informed about the study objectives, rationale and procedures used by the Instrument of Consent, using accessible language. Later, the data were collected directly from the postpartum, as well as analysis of the antenatal card for more technical information.

The measurement of gestational age was based on last menstrual period. Parity was understood as the number of pregnancies that resulted in live births or deaths, similar to being classified study[13]: nulliparous (0 previous children), multiparous (1-3 previous children) and high parity (4 and more children earlier).

The data were processed using the software SPSS (Statistical Package for Social Sciences), version 17.0. Statistical analysis was employed initially simple frequency tables, in order to characterize the sample. Secondly, we used the Chi-square test. The significance level was set at 0.05 (5%) to reject the null hypothesis.

The study was approved by the Ethics in Research/CEP Federal University of Piauí/UFPI, with CAAE: 0092.0.045.000-11. The development of the study followed the principles expressed in Resolution Nº. 196/96 of the National Health Council (CNS), which establishes the ethical principles of research involving humans.[14] The authorization of the institution where the research was conducted was requested by letter, which was signed by the director.

RESULTS

Of the 120 newborns studied, the average weight was 3224, 46 g, the prevalence of underweight was five (4,1%). Between variables was associated only with gestational age.

Table 1. Weight rating (low birth weight, insufficient weight, and excess weight) at birth of newborns studied in the municipality of Picos, Piauí, 2011.

Birth weight (g)	n	%
<2500	5	4,1
2500 - 2999	36	30
3000 - 3999	75	62,5
≥4000	4	3,4
Total	120	100

The coverage of prenatal care in the municipality of Picos, considering who had at least one visit was 119 (99,2%). However, only 86 (71,7%) of the mothers had six or more prenatal visits , 100 (83,3%) began consultations in the first trimester of pregnancy and one (0,8%) did not have any care. The Health System was responsible for 112 (88,2%) of the visits and only seven (5,5%) of these were private. As for the number of births 66 (55%) consisted of multiparous.

In the analysis of gestational age 114 (95%) had their babies at 37 to 42 weeks, noting that the majority of the sample was born with a gestational age appropriate. Regarding the height of the newborn 94 (78,3%) had 46-55 cm . Most newborns were male, with 71 (59,2%), and type of delivery there was a prevalence of cesarean deliveries, with 81 (67,5%). Regarding the use of tobacco and alcohol 115 (95,8%) and 114 (95%) did not use during pregnancy respectively.

Table 2. Distribution of the group studied according to obstetrical characteristics with the birth weight of newborns in the municipality of Picos, Piauí, 2011.

			Birth weight (g)						
Obstetric features			**<3000**		**3000 - 3999**		**≥4000**		
	n (120)	%	**n**	**%**	**n**	**%**	**n**	**%**	***P***
Number of consultations									
None	1	0,8	-	-	1	0,8	-	-	0,512
1 to 5	33	27,5	15	12,5	17	14,2	1	0,8	
6 or more	86	71,7	26	21,7	57	47,5	3	2,5	
First consultation									
1 quarter	100	83,3	37	30,8	61	50,8	2	1,7	0,292
2 quarter	14	11,7	3	2,5	10	8,4	1	0,8	
3 quarter	6	5	2	1,7	3	2,5	1	0,8	
Number of births									
Nuliparous	55	45,8	22	18,3	32	26,7	1	0,8	0,810
Multiparous	45	37,5	13	10,8	30	25	2	1,7	
Great multípara	20	16,7	6	5	13	10,8	1	0,8	

By associating the number of prenatal consultations with the weight of the newborn, postpartum women who had six or more visits 57 (47,5%) had twice the normal weight babies than those who were born underweight. Those with less than six visits, the difference between the newborns underweight and appropriate was very small with 15 (12,5%) and 17 (14,2%) respectively. This reinforces the importance of prenatal consultations in the prevention of IBW.

The women who began prenatal care in the first trimester 61 (51,8%) had their babies with proper weight, the number of births 32 (26,7%) of the newborns were adequate weight.

As for the association of the stature of the newborn with birth weight, those who were 30-45 cm showed a higher occurrence of underweight babies compared to those with normal weight. The newborn females showed a difference of underweight adequate weight lower compared to males. So there is a greater tendency appropriate weight newborn male.

In relation to gestational age infants born at less than 37 weeks showed increased occurrence of underweight, those who delivered vaginally had a small difference between underweight and adequate in relation to the cesarean delivery. Regarding the use of tobacco and alcohol, three (2,5%) and four (3,3%) had children with adequate weight.

Table 3. Distribution of the group studied according to obstetrical characteristics and socio-demographic with the birth weight of newborns in the municipality of Picos, Piauí, 2011.

			Birth weight (g)						
Obstetric features			**<3000**		**3000 - 3999**		**≥4000**		
	n (120)	%	**n**	**%**	**n**	**%**	**n**	**%**	***P***
Stature of the NB									
30 to 45 cm	24	20	12	10	11	9,2	1	0,8	0,335
46 to 55 cm	94	78,3	29	24,1	62	51,7	3	2,5	
>55 cm	2	1,7	-	-	2	1,7	-	-	
Gender									
Female	49	40,8	19	15,8	28	23,3	2	1,7	0,596
Male	71	59,2	22	18,3	47	39,2	2	1,7	
Gestational age									
< 37 weeks	6	5	5	4,1	1	0,8	-	-	0,003
37 to 42 weeks	114	95	36	30	74	61,7	4	3,4	
Type of birth									
Normal	39	32,5	17	14,2	22	18,3	-	-	0,152
Cesareous	81	67,5	23	19,1	54	45	4	3,4	

Table 4. Distribution of the study group according to maternal characteristics and birth weight of newborns in the municipality of Picos, Piauí, 2011.

Maternal characteristics	Birth weight (g)								
			<3000		3000 - 3999		≥4000		
	n	%	n	%	n	%	n	%	P
Smoking									
Yes	5	4,1	2	1,7	3	2,5	-	-	0,44
No	115	95,8	38	31,6	73	60,8	4	3,3	
Alcohol									
Yes	6	5	2	1,7	4	3,3	-	-	0,89
No	114	95	38	31,6	72	60	4	3,3	

DISCUSSION

The birth weight, which is obtained after the first birth, is a single factor that most influences the health and chances of survival of children, which is a strong predictor of neonatal mortality and morbidity.[15] In terms of the characteristics of infants studied, there is a low proportion of weight below 2500g 5 (4,1%), much lower than that found in Piauí and the Northeast, 7,41% and 8,82%, respectivelly.[16]

In a survey[17] conducted in a maternity Rio de Janeiro, 55% of pregnant women attended seven or more visits, and the minimal frequency six queries prenatal care constituted a protective factor against low birth weight (BPN). However, in this work to compare the number of consultations with the weight of the newborn, it was found that there was no statistical relationship between the variables.

Although most of the mothers had attended six or more pre-natal and started in the first quarter it was noticed that the amount was not directly related to quality of care during consultations, given that they attended all the consultations, but not received all the necessary guidelines for the prevention of unfavorable diagnoses.

Regarding the number of births, there was no significant difference between the number of children and the categories of birth weight, similar to that found in a study[18] conducted in Teresina, Piauí. But a dissenting work[19] in Paraná state in which parity was associated with low birth weight, being prevalent in primiparous mothers with one to three children.

As for the gender of the newborn was no significant association, ie, the fact of the child being female or male did not affect the birth weight. However, in disagreement with other studies 19-20 in which there was a relationship female with low birth weight.

The variable gestational age had a higher risk of infant low birth weight for babies born before 37 weeks, corroborating the literature [19,21] thus demonstrating the importance of early prenatal care, identifying complications, avoiding prematurity and consequently low birth weight.

Relate to the type of delivery with the weight of the newborn, found no statistical association. But it was found in a study of Campinas[22], where women undergoing vaginal delivery were at increased risk of having children underweight.

Cigarette smoking and alcohol consumption during pregnancy may be underdiagnosed due to "guilt" of the women, who, bypassing possible rebuke and disapproval by the health professional, can come to report a lower intake of the substance or deny it.[23]

Another important factor that may explain the low prevalence of alcohol abuse during pregnancy is a question of social acceptability. Pregnant women are generally aware that the use of alcohol is harmful to the fetus, and tend to omit the use of alcohol for fear of being disapproved by both the society and the health services.[24]

There is consensus in the scientific literature that ethanol consumption by pregnant women can cause numerous adverse effects on fetal health. Conditions commonly called a spectrum of disorders related to the use of fetal even during pregnancy, which, among which stands out the Fetal Alcohol Syndrome (FAS).[25]

The present study revealed a low incidence of alcohol use and smoking during pregnancy and there was no statistical relationship with birth weight. Yet other studies point to the association, with significantly higher risk of low birth weight for children of smoking mothers.[7,24]

CONCLUSION

Based on the results, it was found that only gestational age was associated with birth weight. Therefore, prenatal care is a time to detect as early unfavorable diagnosis and thus avoid adverse outcomes to NB.

Although the study sample have had great coverage of prenatal care, highlighted the need to improve the service, because the quality is inversely related to the amount.

Therefore, in addition to stimulating the number of queries, one must seek an increase in the quality of prenatal care.

The results allowed us to know the local situation and highlight the need for regional public policy, with emphasis on promotion and health education. Thus, it is essential that investigations continue in order to better understand other factors that may influence birth weight and thus formulate strategies for resolving this problem.

REFERENCES

1. Koffman MD, Bonadio IC. Avaliação da atenção pré-natal em uma instituição filantrópica da cidade de São Paulo. Rev Bras Saúde Matern Infant [Internet]. 2005 Dec [cited 2012 Sept 08];5(1):23-32. Available from: http://www.scielo.br/pdf/rbsmi/v5s1/27838.pdf

2. Cillo TM, Deus RB, Barnabé AS, Ferraz RRN. Consultas de enfermagem realizadas em uma unidade de saúde da família da cidade de Atibaia–SP. ConScientiae Saúde [Internet].2009 Dec [cited 2012 Sept 10];8(4):609-13. Available from: http://www.redalyc.org/articulo.oa?id=92912706010 .

3. Rios CTF, Vieira NFC. Educational action in prenatal care: a reflection on nursing consultation as an opportunity for health education. Ciência & Saúde Coletiva [Internet]. 2007 [cited 2012 Sept 5];2(2): 477-86. Available from: http://www.scielo.br/pdf/csc/v12n2/a24v12n2.pdf

4. Amorim MMR, Melo ASO. Evaluation of the main prenatal routine exams (Part 1). Rev Bras Ginecol Obstet [Internet].2009 [cited 2012 Sept 10];31(3):148-55. Available from: http://www.scielo.br/pdf/rbgo/v31n3/a08v31n3.pdf

5. Rasia ICRB, Albernaz E. Atenção Pré-natal na cidade de Pelotas, Rio Grande do Sul, Brasil. Rev Bras Saúde Matern Infant [Internet]. 2008 Oct/Dec [cited 2012 15 Oct];8(4):401-10. Available from: http://www.scielo.br/pdf/rbsmi/v8n4/05.pdf

6. Serruya SJ, Lago TG, Cecatti JG. O panorama da atenção pré-natal no Brasil e o Programa de Humanização do Pré-natal e Nascimento. Rev Bras Saúde Matern Infant [Internet]. 2004 July/Sept [cited 2012 Oct 10];4(3):269-79. Available from: http://www.scielo.br/pdf/rbsmi/v4n3/a07v04n3.pdf

7. Tiago LF, Caldeira AP, Vieira MA. Fatores de risco de baixo peso ao nascimento em maternidade pública do interior de Minas Gerais. Pediatria (São Paulo) [Internet]. 2008 [cited 2012 Oct 12]; 30(1):8-14. Available from: http://www.pediatriasaopaulo.usp.br/upload/pdf/1245.pdf

8. Ministério da Saúde. Secretaria de Políticas Públicas. Saúde da mulher. Assistência pré-natal: manual técnico. Brasília (DF): O Ministério; 2000.

9. Minamisawa R, Barbosa MA, Malagoni L, Andraus LMS. Fatores associados ao baixo peso ao nascer no Estado de Goiás. Rev Eletr Enferm [Internet]. 2004[cited 2012 Oct 25];6 (3):336-49. Available from: http://www.revistas.ufg.br/index.php/fen/article/view/837/987

10. Minagawa AT, Biagoline REM, Fujimori E, Oliveira IMV, Moreira APC, Ortega LDS. Low birth weight and maternal conditions in pre-natal. Rev Esc Enferm USP [Internet]. 2006[cited 2012 Dec 5];40(4):548-54. Available from: http://www.scielo.br/pdf/reeusp/v40n4/v40n4a13.pdf

11. Sclowitz IKT, Santos SS. Fatores de risco na recorrência do baixo peso ao nascer, restrição de crescimento intra-uterino e nascimento pré-termo em sucessivas gestações: um estudo de revisão. Cad Saúde Pública [Internet].2006 June [cited 2012 Dec 10];22(6):1129-36. Available from: http://www.scielo.br/pdf/csp/v22n6/02.pdf

12. Kilsztajn S, Rossbach AC, Carmo MSN, Sugahara GTL. Assistência pré-natal, baixo peso e prematuridade no Estado de São Paulo, 2000. Rev Saúde Pública [Internet]. 2003 [cited 2012 Dec 15]; 37(3):303-10. Available from: http://www.scielosp.org/pdf/rsp/v37n3/15857.pdf

13. Almeida MF, Novaes HMD, Alencar GP, Rodrigues LC. Mortalidade neonatal no Município de São Paulo: influência do peso ao nascer e de fatores sócio-demográficos e assistenciais. Rev Bras Epidemiol [Internet]. 2002 [cited 2012 Dec 15];5(1):[about 5 screens]. Available from: http://www.scielosp.org/pdf/rbepid/v5n1/11.pdf

14. Brasil. Ministério da Saúde. Conselho Nacional de Saúde. Resolução Nº 196, de 10 de outubro de 1996: diretrizes e normas reguladoras de pesquisas envolvendo seres humanos. Brasília: Ministério da Saúde; 1996.

15. Zambonato AMK, Pinheiro RT, Horta BL, Tomasi E. Fatores de risco para nascimento de crianças pequenas para idade gestacional. Rev Saúde Pública [Internet]. 2004 [cited 2012 Dec

20];38(1):24-9. Available from: http://www.scielosp.org/pdf/rsp/v38n1/18448.pdf

16. Ministério da Saúde. Pacto de atenção básica. [cited 2013 Dec 10]. Available from: http://www.tabnet.datasus.gov.br

17. Santos MMAS, Baião MR, Barros DC, Pinto AA, Pedrosa PLM, Saunders C. Estado nutricional pré-gestacional, ganho de peso materno, condições da assistência pré-natal e desfechos perinatais adversos entre puérperas adolescentes. Rev Bras Epidemiol [Internet]. 2012 [cited 2012 Dec 27];15(1):143-54. Available from: http://www6.ensp.fiocruz.br/repositorio/sites/default/files/arquivos/EstadoNutricional.pdf

18. Lima GSP, Sampaio HAC. Influência de fatores obstétricos, socioeconômicos e nutricionais da gestante sobre o peso do recém-nascido: estudo realizado em uma maternidade em Teresina, Piauí. Rev Bras Saúde Materno Infantil [Internet]. 2004 July/Sept [cited 2013 Mar 10];4(3):253-61. Available from: http://www.scielo.br/pdf/rbsmi/v4n3/a05v04n3.pdf

19. Uchimura TT, Pelissari DM, Uchimura NS. Baixo peso ao nascer e fatores associados. Rev Gaúcha Enferm[Internet]. 2008 Mar [cited 2013 Mar 13]; 29(1):33-8. Available from: http://seer.ufrgs.br/RevistaGauchadeEnfermagem/article/view/5261/2995 .

20. Guimarães EAA, Velásquez-Meléndez G. Determinantes do baixo peso ao nascer a partir do Sistema de Informação sobre Nascidos Vivos em Itaúna, Minas Gerais. Rev Bras Saúde Matern Infant [Internet]. 2002[cited 2013 Mar 12];:283-90. Available from: http://www.scielo.br/pdf/rbsmi/v2n3/17098.pdf

21. Sass A, Gravena AAF, Pelloso SM, Marcon SS. Resultados perinatais nos extremos da vida reprodutiva e fatores associados ao baixo peso ao nascer. Rev Gaúcha Enferm [Internet].2011 [cited 2013 Mar 20];32(2):352-8. Available from: http://www.scielo.br/pdf/rgenf/v32n2/a20v32n2.pdf

22. Antonio MARGM, Zanolli ML, Carniel EF, Morcillo AM. Fatores associados ao peso insuficiente ao nascimento. Rev Assoc Med Bras [Internet].2009[cited 2013 Mar 22];55 (2):153-7. Available from: http://www.scielo.br/pdf/ramb/v55n2/18.pdf

23. Freire K, Padilha PC, Saunders C. Fatores associados ao uso de álcool e cigarro na gestação. Rev Bras Ginecol Obstet [Internet]. 2009[cited 2013 Mar 28];31(7):335-41. Available from: http://www.scielo.br/pdf/rbgo/v31n7/v31n7a03.pdf

24. Silva I, Quevedo LA, Silva RA, Oliveira SS, Pinheiro RT. Associação entre abuso de álcool durante a gestação e o peso ao nascer. Rev Saúde Pública [Internet]. 2011[cited 2013 Mar 29];45(5):864-9. Available from: http://www.scielo.br/pdf/rsp/v45n5/2593.pdf

25. Caixeiro-Brandao SMO, Ferreira EB, Freire RC, Abreu RO, Oliveira RS. Consequences of the alcoholic abstinence syndrome in the alcoholic mother's newly-born child. J Nurs UFPE on line [Internet]. 2012 May [cited 2013 Mar 20];6(5):1031-7. Available from: http://www.revista.ufpe.br/revistaenfermagem/index.php/revista/article/view/2438/pdf_1221

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Corresponding Address

Maria Aline Rodrigues Barros
Universidade Federal do Piauí
Rua Cícero Eduardo, S/N
CEP: 64600-000 – Picos (PI), Brazil