29 - DETERMINATION OF RISK FACTOR FOR A GESTATION USING DATA FROM THE ALIVE NEWBORN CHILD INFORMATION SYSTEM

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SUMMARY

Introduction: The identification of the potential of the risk factor for a pregnant woman and its concept is the primordial fact in the search for the reduction of the mother's, fetus's and neonatal child's morbidity and mortality index. **Aim:** assessing risk factors for pregnancy, focusing on prematurity and low birth weight using data of the Brazilian Live Born Information System (SINASC in Portuguese) in the city of Espírito Santo do Pinhal, from 2001 to 2003. **Methods:** information on maternal age, education, occupation, address, and number of previous pregnancies, length of current pregnancy, kind of delivery, number of prenatal follow-up attendances, date and weight of birth were collected from dataset . The prevalence of each outcomes was estimated and the odds ratios for potential risk factor were estimated using logistic regressions. **Results:** there was a low percentage of missed information. During the period of study, the prevalence of prematurity, low birth weight, and congenital malformation were 7.7%, 8.6%, and 1.4%, respectively. The spatial distribution was inversely proportional to the socioeconomic status of the analyzed areas. Among the studied risk factors, inadequate prenatal follow up (OR 4.2; IC 95% 2.4-7.2) and extenuating maternal occupation (RC 4.6; IC 95% 1.3-16.3) were the most relevant for prematurity while for low birth weight, the main risk factors were low maternal education (less than eight years) (OR 1.5; IC 95% 1.1-2.2) and inadequate prenatal follow up (RC 2.7; IC 95% 1.6-4.5). **Conclusions:** It is possible to conclude that SINASC data from Espírito Santo do Pinhal have high quality and are adequate to epidemiological research.

INTRODUCTION

The identification of the potential of the risk factor for a pregnant woman and its concept is the primordial fact in the search for the reduction of the mother's, fetus's and neonatal child's morbidity and mortality index (MINISTÉRIO DA SAÚDE MS, 2000).

The prenatal attendance is an important factor to intensify the vigilance of the risky pregnancy, since the pregnant woman will get instructions related to the gestation-puerperal cycle and will be concerned with the prevention, diagnosis and treatment procedures.

The premature birth, the birth happened before 37 complete weeks of pregnancy, and the low weight at birth, less than 2,500g., are two adverse conclusions about gestation that can compromise the health of the neonatal, cause immediate complications and permanent injury (TURNPENNY AND ELLARD, 2005).

The age, the mother's schooling and the number of prior pregnancies, have been pointed as potential risk factor for the gestation. According to Kilsztain et al. (2003), mothers at the age of 20 or more than 34, with zero to seven years of study, and being pregnant for the first or the forth time or more, must be considered to be in the risk category for low weight at birth and/or premature birth.

Santos and Schor (2003) identify the maternal biologic factors, inherent to the adolescent, as risk factor to the good development of the gestation. On the other hand, Herter and Acetta (2001) support the interference caused by the psycho-social aspects, questioning the negative consequences caused by the pregnant woman's age or the disadvantageous social structure.

Another risk factor related to the gestation is the job condition. The job during the pregnancy, meanly when it demands exhaustive physical activity, is associated with the increasing of the premature birth incidence (CORREA AND CORREA JUNIOR, 2003).

The gestation risk factor valuation can be done in a perspective way, through the prenatal attendance and in a retrospective way, through the analysis of the Alive Newborn Child Declaration (Declaração de Nascidos Vivos DNV) registers.

The Alive Newborn Child Information System (Sistema de Informação de Nascidos Vivos SINASC) was established by the Ministry of Health in 1989 with the aim of establishing a source of information about births. It has as a tool the DNV (Alive Newborn Child Declaration) index that, in the current model, has its variables sub-divided into seven groups containing some social-demographic information about mothers and other variables related to the gestation, delivery and the newborn child conditions (MS,2001).

Studies realized upon these bases, in different cities, encountered problems that compromised the quality of the information and, consequently, the inference in the studie (SANTOS; SCHOR, 2003; MONTEIRO; BENÍCIO; ORTIZ, 2000).

In Espírito Santo do Pinhal , the SINASC (Alive Newborn Child Information System) was introduced in 2000, being the filling of the DNV (Alive Newborn Child Declaration) written by the nursing team according to the protocol of filling process and the document formalities that were established by the Health Municipal Office (Secretaria Municipal de Saúde SMS).The quality of the information found in the data bank of SINASC (Alive Newborn Information System) is controlled by the Valuation and Control Unity (Unidade de Avaliação e Controle) and, when necessary, by the communitarian agents' home visits.

Espírito Santo do Pinhal municipal district is located in the eastern part of the State of São Paulo, Brazil; its population is 41,485 inhabitants. The city has four units of Family Health Program (Programas de Saúde da Família PSF), two Health Communitarian Agent Programs (Programas de Agentes Comunitários de Saúde PACS), a general hospital and a center of specialization.

METHODS

It is a kind of transversal study, which information was achieved from the SINASC (Alive Newborn Information System) registers that were provided by Espírito Santo do Pinhal's SMS (Health Municipal Office), related to the period from 2001 to 2003.

The variables were applied in its original form or arranged in categories.

The maternal occupation activities were arranged in six groups, according to the Large Groups and the Brazilian Classification Scope Levels of The Occupations (Grandes Grupos e os Níveis de Competência Brasileira de Ocupações CBO,2002) as it follows: group 1 - science and art professionals; group 2 medium level technicians; group 3 workers in the administrative area; group 4 general labor workers, salespeople of stores and markets; group 5 agricultural, cattle raising, forest and fishing workers; and group 6 assets production workers and industrial workers. Besides that, it was determined a seventh

group students without a professional fixed activity.

A descriptive analysis of the study of the variables was performed, and the predominance of the events of interest (premature birth and low weight at birth) was calculated in each determined geographic area of Espírito Santo do Pinhal municipal district.

Logistics regression models were made to preview possible risk factors. It was used uni-varied models and specific multiples for each one of the dependant variables (premature birth and low weight at birth) and, as independent variables, age and mother's schooling, number of pre-natal medical appointments, mother's occupation and prior gestations were applied. To determine the final multiple model for each variable of interest was applied the *step forward* method and the variables that remained in the models were the ones that presented statistics significance.

The odds ratio was calculated and its respective assurance intervals of 95% (AI 95%). It was adopted the significant level of 5% in all the analysis. The Excel program was used to build the data bank, the geo-referential MapInfo was used for the analysis of the special distribution of the events and the statistics pack SPSS 8.0 was used for the descriptive analysis and odds ratio estimation.

This study was approved by the ethics commission of the Santo Amaro University.

RESULTS

During the three years of study the total number of deliveries in Espírito Santo do Pinhal was 1854. The number of deliveries that occurred in the years 2001 (639), 2002 (640) e 2003 (575) remained stable, in spite of the fall of 3.5% during the last year of the period. Regarding the prevailing of these two conclusions we notice that, during the period of three years of this study, the premature birth prevailing was of 7.7% whereas the one of low weight in birth was of 8.6%.

Chart 1 presents the descriptive analysis of the categorical variables. We can notice that 20% of the pregnant women were adolescents. The large coverage about the prenatal pregnant women evaluated in the current study and the amount of medical appointments attended call one's attention, since its totality was four appointments or more.

The mother's percentage with higher education was low and similar to the one with less than 4 years of study. Almost 40% of the pregnant women did not have the complete elementary school.

Regarding to the mother's occupation, practically, 4/5 of the pregnant women performed house work activity or sales activity in the local commerce (Group 4).

Among the mothers that belong to the student group, 71% were less than 20 years old and the remaining ones were between 20 and 34 years old.

Less than 15% of the pregnant women had had more than two prior gestations and, among the others, half was in the first gestation.

Chart 1 Absolute values and relatives of the qualitative variables analyzed in the current study during the period of 2001-2003 in Espírito Santo do Pinhal.

Variables (Number of Cards)		Number	%(1)
Mothers Age (years) (1853)	up to 19	402	21.7
	20 to 34	1,275	68.8
	35 or more	176	9.5
Prenatal Appointments (1854)	4 or more	1,743	94.0
	0 3	111	6.0
Mothers Schooling (years) (1854)	12 or more	241	13.0
	8 to 11	633	34.1
	4 to 7	706	38.1
	0 to 3	274	14.8
Mothers occupation (1833)	Group 1	82	4.5
	Group 2	19	1.0
	Group 3	77	4.2
	Group 4	1,462	79.8
	Group 5	23	1.2
	Group 6	128	7.0
	Student	42	2.3
Prior Gestations(1853)	none	764	41.2
	1 or 2	814	43.9
	3 or more	275	14.8
Pregnancy Age(1854)	Term	1,711	92.3
	Pre-term	143	7.7
Weight at Birth(1854)	Normal	1,695	91.4
	Low Weight	159	8.6
Delivery(1854)	Vaginal	647	34.9
	Caesarian	1,205	65.1

(1)Percentage

The prevalence of premature birth and of low weight at birth was less than 10% since there were more cases of low weight at birth than premature birth.

The analysis of the prevalence distribution of premature birth and low weight at birth according to the geographic area shows that the PSF III and IV (Family Health Program) present important prevalence for both conclusions in spite of not being high values. The PSF I (Family Health Program) area presents twice more cases of low weight at birth (more high prevalence) than the premature birth. The same is true about the PSF III (Family Health Program) area where the prevalence of premature birth is 31% less than the one of low weight at birth. Differently from the observed fact in these two regions, in the PSF IV(Family Health Program) area occurred more cases of premature birth than the ones with low weight at birth (26% less).The PSF II (Family Health Program) areas and the Rural Zone were the ones that presented less prevalence for these two conclusions.

In chart 2 and 3 we find the odds ratio and its respective assurance intervals of 95% for the risk factor potentials for the premature birth and low weight at birth, respectively.

Chart 2 Odds ratio and assurance intervals of 95% for the premature birth according to analyzed risk factors, estimated in uni-varied models and in multiple model in Espírito Santo do PInhal (2001- 2003).

Risk Factor	Premature Birth [1]					
	Uni-varied			Multiple		
	OD[2]	AI[3] 95%		OD	AI 95%	
Mothers Age						
up to 19 years	1.12	0.75	1.69			
20 to 34 years[4]	1.00	-				
35 years or more	0.89	0.48	1.67			
Mothers Schooling						
0 to 7 years	0.82	0.58	1.15			
8 or more[4]	1.00	-				
Prenatal Appointments						
0 to 3 appointments	3.31	2.01	5.47	4.2	2.43	7.24
4 or more appointments[4]	1.00	-				
Mothers Occupation						
Group 1 [4]	1.00	-				
Group 2	1.64	0.16	16.71			
Group 3	2.47	0.62	9.89			
Group 4	2.01	0.63	6.45			
Group 5	2.49	0.39	15.85	4.62	1.31	16.30
Group 6	4.20	1.20	14.71			
Student	2.75	0.59	12.86			
Prior Pregnancies						
None [4]	1.00	-				
1 or 2	0.58	0.40	0.84	0.53	0.36	0.78
3 or more	0.60	0.35	1.03	0.46	0.26	0.82

(1) Pregnancy age less than 37 weeks; (2) Odds Ratio; (3) Assurance Interval; (4) Reference Category.

Regarding the premature birth, in the uni-varied model, less than four prenatal medical appointments and the occupational activity in group 6 (industrial activity) were statistics significant risk factors. On the other hand, having had one or more prior gestations showed a protective factor for this conclusion. In the multiple model, the prenatal medical appointments, the mother's occupation and prior gestations variables were included. The variable behavior remained practically the same, with a low number of prenatal medical appointments and mother's occupation (in the case of agricultural activities) presenting as risk factors and prior gestations (at least one gestation or more) as a protective factor.

Chart 3 Odds ratio and assurance intervals of 95% for low weight at birth according to analyzed risk factors, estimated in one-variable models and in multiple model, in Espírito Santo do Pinhal (2001-2003)

Risk Factor	Low Weight at Birth [1]					
	Uni-varied			Multiple		
	OD[2]	AI[3]95%		OD	AI 95%	
Mothers Age						
up to 19	1.46	1.01	2.13			
20 to 34 years[4]	1.00	-				
35 or more	1.20	0.69	2.08			
Mothers Schooling						
0 to 7 years	1.44	1.03	2.01	1.54	1.08	2.21
8 or more [4]	1.00	-				
Prenatal appointments						
0 to 3	1.96	1.06 - 3.60		2.66	1.57	4.51
4 or more appointments[4]	1.00	-				
Mothers occupation						
Group 1 [4]	1.00	-				
Group 2	10.68	0.92 -124.26				
Group 3	5.2	0.61 - 45.68				
Group 4	7.71	1.07 - 55.24				
Group 5	12.01	1.20 -120.56				
Group 6	8.90	1.15 - 68.65				
Student	4.00	0.36 - 45.09				
Prior Pregnancies						
None [4]	1.00	-				
1 or 2	0.54	0.37-0.78		0.48	0.33	0.70
3 or more	0.96	0.61-1.50		0.65	0.40	1.07

(1) Weight lower than 2.500g

Low weight at birth, in the uni-varied models, being adolescent mother, having attended less than four neonatal medical appointment, having less than eight years of schooling and having an exhaustive occupational activity (groups 4, 5 and 6) indicated risk factors; having had one or two prior gestations indicated protective factor. In the multiple model, only the schooling and the number of neonatal medical appointments were risk factors and one or two prior gestations were protective factors.

Discussion

The emphasis of this study is in having used information from SINASC (Alive Newborn Child Information System) of a city where the information quality is warranted by a protocol that establishes responsibility toward the chosen professionals to perform this function.

The spatial distribution of the premature birth and low weight at birth prevalence, during the three years of study, showed that the PSFs I, III and IV,(Family Health Program), the most poor ones, were the ones that registered the highest number of cases of these conclusions. It has been registered that socio-economic conditions can interfere in the evolution of the gestation (KILSZTAJN et al, 2003). The areas with minor income and minor structural resources are those where it is expected a higher prevalence of the adverse gestation conclusions (COIMBRA et al, 2003; MONTEIRO; BENÍCIO; ORTIZ, 2000).

Most of the studies have presented the mother's age and, specially the adolescence, as the risk factors for premature birth and/or low weight at birth (NASCIMENTO E GOTLIEB, 2001; COSTA et al, 2001; KILSZTAJN et al, 2003).

In Espírito Santo do PInhal, adolescent pregnancy was a statistics significant risk factor only for low weight at birth. Simões et al. (2003) pointed out that the low weight at birth and premature birth prevalence among adolescents between 18 and 19 years old were like the ones found in the group between 20 and 34 years old. Among the adolescents under 18 years old these values were 2 times higher. The gynecologic age theory explains the inverted relationship between the risk for adverse events and the adolescent's age.

The mother's inferior schooling has been reported as risk factor for the gestation, meanly for low weight at birth (NASCIMENTO and GOTLIEB, 2001). Monteiro et. al. (2000), observed that the low weight at birth risk was higher among the pregnant women with the incomplete elementary school. In the current study, having less than eight years of schooling was pointed as risk factor for low weight at birth. It's important to remember that schooling, much more than an intelligence level index, is a socio-economic condition index, reflecting a multi- factorial dynamic that can interfere, in a significant way, in the pregnant woman and her child's prognosis.

The importance for the prenatal attendance for the good development of the gestation is consensus among the authors that investigate this subject (COIMBRA et al., 2003; KILSZTAJN et al., 2003).The study results confirm this factor when they point out that, for premature birth and low weight at birth, the effect of the inadequate prenatal attendance is sufficiently strong to resist the multiple model.

Regarding the mother's occupation, apparently, the premature birth is only affected by extremely exhaustive activities, as the activities of group 6, according to Corrêa and Corrêa Junior's report. (2000). On the other hand, the low weight at birth was more sensitive and associated with moderate to maximum intensity activities (group 4 to 6).

The mother's occupation groups 4 and 6 involve high energetic expenditure activities that generally are not compensated with energetic consume. This unbalance can result in low weight gain, fetal growing alteration and decrease of the ability for keeping the milk production (MATSUDO, 2004).

From these studies results we can conclude that : the data from SINASC (Alive Newborn Child Information System) of Espírito Santo do Pinhal have shown an excellent quality, with high percentage of DNV (Alive Newborn Child Declaration) filling of the blanks; the premature birth and low weight at birth presented spatial distribution that is oppositely related with the socio-economic conditions of the analyzed areas; among all the analyzed factors, the inadequate prenatal attendance and the mother's activity in the areas where the physical activities can be considerate exhaustive pointed out the most important risk factors for premature birth; for low weight at birth, the mother's inferior schooling and the inadequate prenatal attendance were pointed out as the most relevant risk factors.

Key-words: risk factor, premature birth, low weight at birth.

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Alfésio Luís Ferreira Braga: abraga@uol.com.br Lourdes C. Martins: lourdesc@usp.br**DETERMINATION OF RISK FACTORS FOR A GESTATION USING DATA FROM THE ALIVE NEWBORN CHILD INFORMATION SYSTEM**

Summary

Introduction: the identification of the potential of the risk factor for a pregnant woman and its concept is the primordial fact in the serch for the reduction of the mather's fetu's and neonatal child's morbidity and mortality index. **Aim:** assessing risk factors for pregnancy, focusing on prematurity and low birth weight using data of the Brazilian Live Born Information System (SINASC in Portuguese) in the city of Espírito Santo do Pinhal, from 2001 to 2003. **Methods:** information on maternal age, education, occupation, address, and number of previous pregnancies, length of current pregnancy, kind of delivery, number of prenatal follow-up attendances, date and weight of birth were collected from dataset . The prevalence of each outcomes was estimated and the odds ratios for potential risk factor were estimated using logistic regressions. **Results:** there was a low percentage of missed information. During the period of study, the prevalence of prematurity, low birth weight, and congenital malformation were 7.7%, 8.6%, and 1.4%, respectively. The spatial distribution was inversely proportional to the socioeconomic status of the analyzed areas. Among the studied risk factors, inadequate prenatal follow up (OR 4.2; IC 95% 2.4-7.2) and extenuating maternal occupation (RC 4.6; IC 95% 1.3-16.3) were the most relevant for prematurity while for low birth weight, the main risk factors were low maternal education (less than eight years) (OR 1.5; IC 95% 1.1-2.2) and inadequate prenatal follow up (RC 2.7; IC 95% 1.6-4.5). **Conclusions:** It is possible to conclude that SINASC data from Espírito Santo do Pinhal have high quality and are adequate to epidemiological research. **Headings:** pregnancy, risk factors, prematurity, low birth weight.

LA RECHERCHE DES FACTEURS DE RISQUE LIÉS À LA GROSSESSE À TRAVERS L'UTILISATION DES DONNÉES DU SISTEMA DE INFORMAÇÕES DE NASCIDOS VIVO

Résumé

Introduction: Identifier les facteurs de risque potentiel pour la femme enceinte constitue une action d'extrême importance pour la réduction des risques de maladie et décès de la mère. **L'objectif:** La recherche des facteurs de risque liés à la grossesse, notamment la prématurité et la baisse de poids du nourrisson, constituent les objectifs de cette étude. De telles données ont été récoltées dans la ville de Espirito Santo do Pinhal, dans le système d'informations concernant les nouveaux nés, entre 2001 et 2003. **La méthode:** Les informations utilisées pour la recherche étaient axées sur la mère : âge, scolarité, profession, durée et nombre des grossesses antérieures, type d'accouchement, nombre des visites d'accompagnent médical, adresse, date et poids du bébé à la naissance. Nous avons utilisé la méthode de la régression logistique d'une et des plusieurs variations, pour justement estimer les prévalences de chaque résultat. **Les Résultats:** Nous avons pu remarquer, pendant le déroulement de l'étude, une hausse significative de naissance d'enfants vivants. Le pourcentage des bébés nés prématurés, a été dans l'ordre de 7,7%. Les bébés considérés comme ayant le poids au-dessus de la moyenne a été de 8,6%. Au cours de la grossesse, nous avons constaté que le suivi médical inadéquat (RC 4.2, IC 95% 2,4-7,2) et l'activité professionnelle très exténuante (RC 4,6 ;IC95% 1,3-16 ;3) se sont avérés les plus importantes causes de la prématurité chez le bébé. Par rapport à la baisse de poids du bébé à la naissance, les causes sont l'accompagnement (RC 2,7 IC95% 1,6-4.5) médical insuffisant pendant la grossesse et le bas niveau de scolarité de la mère (RC 1,5 ;IC 95%1,1-2,2). **Conclusion:** Nous constatons la qualité des données de la Sinasc de la ville d'Espirito Santo do Pinhal, comme étant excellente et tout à fait appropriée à la réalisation de l'étude épistémologique. **Mots clés:** Grossesse, facteurs de risque, prématurité, baisse de poids à la naissance

DETERMINACIÓN DE LOS FATORES DE RIESGOS PARA LA GESTATION UTILIZANDO INFORMACIONES DEL SISTEMA DE INFORMAÇÕES DE NASCIDOS VIVOS

Resumen

Introducción: La identificación de los potenciales fatores de riesgos para la gestante y su concepto es la accion primordial en la busqueda por la reducción de los índices de morbidad y mortalidad materna, fetal y neonatal. **Objetivo:** avaluar potenciales fatores de riesgos para la gestacion, con enfoque en la prematuridad y bajo peso al nascer utilizando las informaciones del Sistema de Informação de Nascidos Vivos en la ciudad del Espírito Santo do Pinhal, en 2001 y 2003. **Métodos:** Fueron utilizadas informaciones referentes e la edad, escolaridad y ocupacion de la madre, número de gestaciones anteriores, la dirección completa, duración de la gestación, tipo de parto, número de consultas del pré-natal, fecha y peso al nascer. Fueron estimadas las prevalências de las prematuridad y bajo peso al nascer y las razones del chance a través de regreción logística univariada y múltipla. **Resultados:** hubo una elevada porcentage de los campos llenados de la Declaración del Nascido Vivo en la ciudad del Espírito Santo do Pinhal. En la duración del estudio, la prevalência de prematuridad fue de 7,7% y la del bajo peso fue de 8,6%. La distribución em la cuidad fue lo inverso proporcional a la condición sócio economica de las regiones analisadas. En todos los fatores avaluados, el acompanãmiento inadequado del pré-natal (RC 4,2; IC 95% 2,4-7,2) y la ocupación de la madre em las areas donde las atividades físicas pueden ser consideradas extenuantes (RC 4,6; IC 95% 1,3-16,3) apresentan los mas importantes fatores de riesgos para la prematuridad mientras que para el bajo peso al nascer fue la baja escolaridad de la madre (RC 1,5; IC 95% 1,1-2,2) y el acompanãmiento inadecuado del pré-natal (RC 2,7; IC 95% 1,6-4,5). **Conclusión:** las informaciones del SINASC de la ciudad del Espírito Santo do Pinhal son de excelente calidad y por lo tanto, adecuados para la pesquisa epidemiológica. **Palabras-llaves:** gestacion, fatores de riesgo, prematuridad, bajo peso al nascer.

DETERMINAçãO DE FATORES DE RISCO PARA A GESTAçãO UTILIZANDO DADOS DO SISTEMA DE INFORMAçõES DE NASCIDOS VIVOS

Resumo

Introdução: A identificação de potenciais fatores de risco para a gestante e seu concepto é ação primordial na busca pela redução dos índices de morbidade e mortalidade materna, fetal e neonatal. **Objetivo:** avaliar potenciais fatores de risco para a gestação, com enfoque na prematuridade e baixo peso ao nascer utilizando os dados do Sistema de Informação de Nascidos Vivos no município de Espírito Santo do Pinhal, entre 2001 e 2003. **Métodos:** foram utilizadas informações referentes à idade, escolaridade e ocupação materna, número de gestações anteriores, o endereço completo, duração da gestação, tipo de parto, número de consultas de pré-natal, data e peso de nascimento, Foram estimadas as prevalências dos desfechos adversos e as razões de chance através de regressão logística univariada e múltipla. **Resultados:** houve uma elevada porcentagem de preenchimento dos campos da Declaração de Nascido Vivo no município de Espírito Santo do Pinhal. No período do estudo, a prevalência de prematuridade foi de 7,7% e a de baixo peso foi de 8,6%. A distribuição espacial foi inversamente proporcional à condição socioeconômica das regiões analisadas. Entre todos os fatores avaliados, o acompanhamento inadequado de pré-natal (RC 4,2; IC 95% 2,4-7,2) e ocupação materna nas áreas onde as atividades físicas podem ser consideradas extenuantes (RC 4,6; IC 95% 1,3-16,3) se mostraram os mais importantes fatores de risco para prematuridade enquanto que para baixo peso ao nascimento foi a baixa escolaridade materna (RC 1,5; IC 95% 1,1-2,2) e o acompanhamento inadequado de pré-natal (RC 2,7; IC 95% 1,6-4,5). **Conclusão:** os dados do SINASC de Espírito Santo do Pinhal são de excelente qualidade e, portanto, adequados para pesquisa epidemiológica. **Palavras-chaves:** gestação, fatores de risco, prematuridade, baixo peso ao nascer.