Original Article

Profile of pregnant adolescents and their newborns in a southern Brazilian municipality

Perfil de adolescentes gestantes e de seus recém-nascidos em município do sul do Brasil

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ABSTRACT | OBJECTIVE: to describe the profile of pregnant adolescents and their newborns in a municipality in southern Brazil. **METHOD:** this is a cross-sectional descriptive study. Data collection was performed on the basis of data from declarations of live births in the municipality between the months of January to December 2018. The data were analyzed with the aid of the SPSS version 21.0 program. To assess the association between numerical variables, Pearson or Spearman linear correlation tests were used. The level of significance adopted was 5% (p <0.05) using measures of central tendency of variability, absolute and relative frequencies. The results presented through graphs and tables. **RESULTS:** out of 2,974 birth records, 445 were from teenage mothers, resulting in a quantity of (15%) teenage pregnancies. Most adolescents had an average observed age of 17.5 years, (62.5%) were white, (92.8%) were single. As for education, 61.6% had completed elementary school and (87%) occupied the home. **CONCLUSIONS:** an expressive number of pregnant adolescents was evidenced, observing the need to implement family planning strategies for adolescent pregnancy prevention programs. The study also made it possible to identify the statistically significant association between the number of prenatal consultations and the birth weight of neonates in a positive way for the age of the pregnant women and the context of life.

DESCRIPTORS: Women's health. Teenage pregnancy. Newborn.

RESUMO | OBJETIVO: descrever o perfil de adolescentes gestantes e de seus recém-nascidos em um município do sul do Brasil. **MÉTODO:** trata-se de um estudo transversal descritivo. A coleta de dados foi realizada com base nos dados das declarações de nascidos vivos do município entre os meses de janeiro a dezembro de 2018. Para avaliar a associação entre as variáveis numéricas, os testes da correlação linear de Pearson ou Spearman foram utilizados. O nível de significância adotado foi de 5% (p<0,05), utilizando-se medidas de tendência central de variabilidade, frequências absoluta e relativa. **RESULTADOS:** de 2.974 registros de nascimento, 445 eram de mães adolescentes, resultando num quantitativo de (15%) de gravidez na adolescência. A maioria das adolescentes possuía idade média de 17,5 anos, (62,5%) eram brancas, (92,8%) eram solteiras. Quanto à escolaridade, 61,6% com o ensino fundamental completo; e (87%) ocupação do lar. Observou-se associação estatisticamente significativa ntre o número de consultas de pré-natal e o peso ao nascer dos neonatos de maneira positiva para a idade das gestantes e contexto de vida. **CONCLUSÕES:** evidenciou-se um expressivo número de adolescentes gestantes, observando-se a necessidade da implementação de estratégias de planejamento familiar pelos programas de prevenção da gravidez na adolescência.

DESCRITORES: Saúde da Mulher. Gravidez na adolescência. Recém-nascido.

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Introduction

According to the Children and Adolescents Statute, children are under to 12 years old and adolescence is between 12 and 18 years old[1]. In this period of life, there are biological and psychosocial changes that lead a person from childhood to adulthood, pregnancy in this period represents a factor additional work that the teenager needs to deal with[2].

Teenage pregnancy is associated with two psychological risks: being a mother and teenager. When the teenager becomes pregnant, she starts to develop two roles, daughter and mother, so she will have to redefine her identity, taking into account that hereafter, her life will be linked with a son. Your projection for the future will be affect, plans will be postponed and will be redirected to the alternative and adapt to the maternal role, while being a daughter and teenager, will not be a chore easy[3].

Female sensitivity during pregnancy may increase, making women more susceptible to emotional disorders, including anxiety and depression, thus affecting the maternal-fetal bond[4].

The adolescence period is already a phase of emotional instability; happening an early pregnancy, the woman will have to develop psychological skills and emotionally difficult to deal with. Because this is an unwanted pregnancy or not programmed, the bond between mother and baby may be compromised by the absence of family support, stress and even symptoms of depression[5].

Another fact linked to pregnancy in adolescence would be a repetition of a new pregnancy, since women who start motherhood at this stage of life have a greater number of children throughout their reproductive life. Most of the time, subsequent pregnancies are also unwanted or programmed6. The present study aimed to describe the profile of pregnant adolescents and their newborns born in a municipality in southern Brazil.

Method

This is a descriptive cross-sectional study. This study was carried out at Municipal Health Secretariat of the municipality of Alvorada, from the surveillance service epidemiological analysis, based on data from the municipality's Live Birth Statements, from January to December 2018.

The study population consisted of pregnant adolescents who had children born alive in 2018 in the municipality of Alvorada. The incomplete Declarations of Live Births (DNV) and the adolescents who did not live in the municipality were excluded from researches. Data collection was carried out in the month of April 2019, in the archive of the municipal health department. The city of Alvorada has 25 neighborhoods, for this research, 10 neighborhoods were selected to compose the sample of this study.

The variables included in the Declarations of Live Births were evaluated: socio-demographic variables of the adolescent (age, education, occupation, social marital status, race / color), obstetric data variables (number of previous pregnancies, number of vaginal deliveries, number of cesarean sections, number of live births, number of fetal losses / abortions), current pregnancy data (date of last menstruation, number of prenatal consultations, month of pregnancy when prenatal care started, type of pregnancy), delivery data (presentation, induced labor, type of delivery, cesarean section occurred before labor begins, birth assisted by), variables on childbirth (place of occurrence), variables on newborns (gender, weight, race / color, Apgar index, congenital anomaly detected).

Quantitative variables were reduced by an average and standard deviation or median and interquartile range. The Jarque-Bera test was used to assess normality, as it performs well in this type of assessment. The variables categorical were described by absolute and relative frequencies. To compare averages, t-Student tests or Analysis of Variance (ANOVA) were applied. To assess the association between numerical variables, Pearson's linear correlation tests or Spearman were used. The level of significance adopted was 5% ($p < 0.05$) and the analyzes were performed using SPSS version 21.0.

The project was referred to the Research Ethics Committee (CEP) of the Faculty Inedi - CESUCA where it obtained the ethical and methodological guarantee for its execution (CAAE 07069418.5.0000.5665).

Results

Of the total of 2,974 birth records, 445 were from teenage mothers, resulting in a prevalence of 15% (95% CI: 13.8% to 16.4%) of pregnancy in adolescence. Regarding socio-demographic conditions, the mean age was 17.5 years (SD = 1.4). White/62.5% adolescents predominated, with education primary (61.6%), were single (92.8%) and had the occupation of the home (87%). Regarding marital status, it was observed that 92.8% were single (Table 1).

Table 1. Sociodemographic characterization of the sample of adolescents. Alvorada, Rio Grande do Sul, Brazil, 2019

Variables	**n = 445**
Age – Avarage ± SP	17,5 ± 1,4
Education – n (%)	
No schooling	1 (0,2)
Elementary (1º ao 4º)	9 (2,0)
Elementary (5º ao 8º)	274 (61,6)
Medium	155 (34,8)
Incomplete higher	4 (0,9)
Ignored	2 (0,4)
Marital status **– n (%)**	
Single	413 (92,8)
Married	20 (4,5)
Cohabitation/Consensual Marriage	10 (2,2)
Ignored	2 (0,4)
Race/Color of Adolescent – n (%)	
White	278 (62,5)
Black	67 (15,1)
Brown	98 (22,0)
Ignored	2 (0,4)
Ocupation – n (%)	
Housewife	387 (87,0)
Saleswoman	1 (0,2)
No occupation	1 (0,2)
Student	14 (3,1)
Others	42

Source: The autors (2019).

The obstetric data of the current pregnancy show that the average of the weeks of gestation was 38.4 weeks, 77.8% performed vaginal birth, and 22.2% by cesarean section. The average of prenatal consultations was 7.2 consultations, with 2.9% of pregnant women did not have consultations and 70.6% had at least 6 consultations. The average month of pregnancy in which pregnant women started prenatal care was 3.3 months (Table 2).

Table 2. Distribution of adolescents according to current pregnancy data. Dawn, Rio Grande do Sul, Brazil, 2019

Variables	Avarage (SD)	n (%)
Weeks of gestation of delivery - mean ± SD		38,4 ± 2,3
Mean prenatal consultations - mean ± SD		7,2 ± 3,1
Number of prenatal consultations (n /%)		
More then 6		314 (70,6%)
1 to 5		118 (26,5%)
None		13(2,9%)
Month prenatal care started - mean ± SD		3,3 ± 1,5
Type of pregnancy - n (%)		
Only		438 (98,4%)
Double		7 (1,6%)
Type of Birth - n (%)		
Vaginal		346 (77,8%)
Cesarean		99 (22,2%)
Complications with childbirth - n (%)		
Cesarean section occurred before labor		34 (7,6%)
Induced childbirth		280 (62,9%)

Source: The autors (2019).

Regarding the characteristics of newborns, it was observed that 51.7% were male and 47.9%, female, and 61.7% were white. The average birth weight was 3.14 kg, length 48.3 cm and head circumference of 33.6cm. With regard to the first minute apgar score, the median was 9; and in fifth minute also 9. The occurrence of congenital anomaly was 1.1% (Table 3).

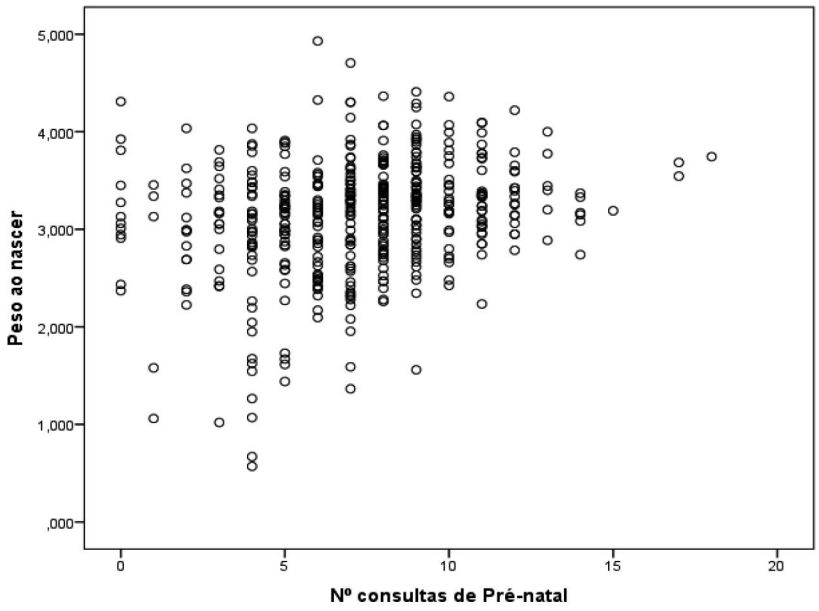
Table 3. Characterization of newborns. Alvorada, Rio Grande do Sul, Brazil, 2019

Variables	n = 447
Gender – n (%)	
Male	231 (51,7)
Female	214 (47,9)
Ignored	2 (0,4)
Race/color – n (%)	
White	276 (61,7)
Black	58 (13,0)
Brown	113 (25,3)
Birth weight (kg) - mean ± SD	3,14 ± 0,61
Length at birth (cm) - mean ± SD	48,3 ± 3,3
Head circumference (cm) - mean ± SD	33,6 ± 2,2
Apgar 1st minute - median (P25 - P75)	9 (8-9)
Apgar 5th minute - median (P25 - P75)	9 (9-10)
Congenital Anomaly - n (%)	5 (1,1)
Delivery at birth - n (%)	
Cephalic	431 (96,4)
Pelvic or Podalic	13 (2,9)
Ignored	3 (0,7)

Source: The autors (2019).

Figure 1 shows the association between birth weight and number of consultations prenatal care; there was a statistically significant positive association between the number of prenatal consultations and newborns' birth weight (r = 0.246; p <0.001).

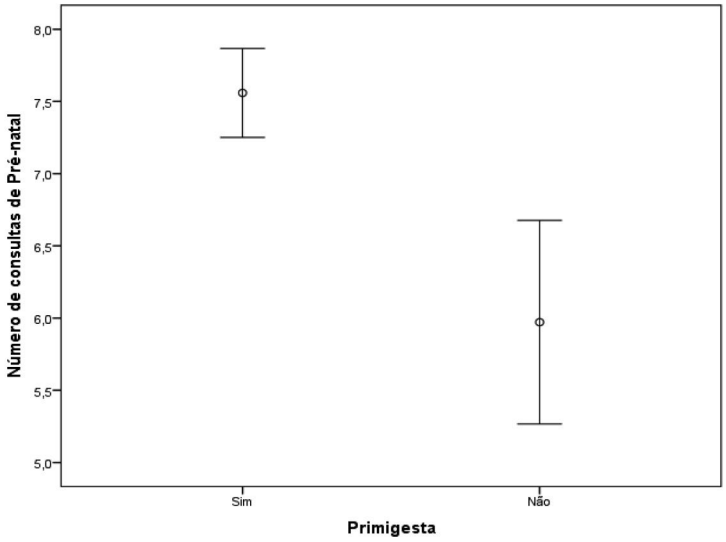
Figure 1. Association between birth weight and number of prenatal appointment. Alvorada, Rio Grande do Sul, Brazil, 2019



Source: The autors (2019).

It should be noted that there was no significant association between the number of consultations prenatal care with the mother's race / color (p = 0.553), with the neighborhood of residence (p = 0.298) and with the mother's age (p = 0.233). However, there is a weak association, but statistically significant, between educational level and number of pre-school visits natal (r s = 0.104; p = 0.029). The evaluation of the number of prenatal appointment and the primiparity shows that mothers who were primiparous had a higher number prenatal consultations, when compared to non-pregnant women (p <0.001), as demonstrates Figure 2.

Figure 2. Number of prenatal appointment and primiparity. Alvorada, Rio Grande do Sul, Brazil, 2019



Source: The autors (2019).

Discussion

The main data found referring to the sociodemographic profile point to that most of the adolescents in the present study had elementary school two incomplete, a finding similar to the study carried out in 2012 in Londrina, Paraná, with the objective of tracing the profile of pregnant adolescents in the municipality, which that the majority of adolescents (48.8%) also had elementary school two incomplete[8].

Regarding the prevalence of pregnant adolescents in the municipality, data show a lower prevalence compared to those found in a survey in Vitória da Conquista, Bahia, in the year 2017, which found a prevalence of 37% of pregnant adolescents in that city[9].

About marital situation, most of the adolescents in this study were unmarried, finding that goes against of the conclusions find in the other study carried out to investigate the factors the recurrence of pregnancy in adolescence, which demonstrated that of the 65.5% of young people were married[10].

Regarding the color of the mother's skin, most were white. In one study carried out to verify the socioeconomic, demographic, cultural, regional and behavior of teenage pregnancy in Brazil, in 2016, it was observed that the teenager, being white, reduced the probability of an early pregnancy, a fact this controversial to the result obtained[11].

As for the observed average age, results very similar to those obtained in this study were described in a study carried out in the city of Ribeirão Preto, São Paulo, in the year 2017, to find the profile of pregnant adolescents using SUS, in which the mean age observed was 17.3 years[12].

With regard to the obstetric data of adolescents who have already been pregnant and those were pregnant for the first time, most were pregnant for the first time; the results show similarity with the study carried out in a high-risk pregnancy monitoring hospital in Ceará, which outlined the profile of pregnant teenagers admitted to the ward, in which 82.2% were experiencing their first pregnancy, 11.1% the second and 4.44% the third[13].

It should be noted that the majority of adolescents did not perform any paid activity, similar data to the found in a study carried out in the city of Piracicaba in São Paulo, in which 79.4% of adolescents did not work[14].

The average number of consultations was higher than that recommended by the Ministry of Health, which provides for a minimum of 6 consultations, unlike 40% of adolescents evaluated in a study conducted in the interior of the state of Minas Gerais in 2017, which had less than six prenatal consultations[15].

The results of the present study regarding the positive association statistically significant, between the number of prenatal consultations and weight at born of neonates, collaborate with the findings obtained in 2019, in research carried out in the state of Rio Grande do Norte, which evaluated maternal conditions of adolescents and the impact on the weight of neonates, and which demonstrated an association between the number of prenatal consultations and birth weight[16].

The average birth weight of the newborn found in this study was similar to the results observed in a study carried out in 2017 in the municipality of Diamantina, Minas Gerais, which assessed the socioeconomic determinants and gestational birth weight of children born at term, in which the mean weight at being born was 3.146 kg[17].

The most prevalent type of delivery in this study was vaginal delivery, what doesn't match the findings to those obtained in a study carried out in Goiás for diagnose pregnancy rates and other factors related to pregnancy in the adolescence in the year 2017, in which the most prevalent type of delivery was cesarean[18].

The findings of this research demonstrate a high prevalence of pregnancy in the adolescence, not being very different in the rest of the country, it should be noted that is a public health problem, arising from the fact that, increasingly, young people are starting their sex lives early, and education and care systems health have not been shown to be effective in changing this reality. In parallel with this situation, lack of adherence to prenatal care or inadequate prenatal care are also factors stand out, as they cause complications for both the mother and the fetus,

remember that prenatal care is a protective factor and that, if performed properly, promotes better results both in childbirth and in the puerperium.

It is pointed out as the main limitation of the present study, The fact of the Declaration Live Born does not have more comprehensive information, allowing to draw a profile complete social dimension and the main individual and individual vulnerability conditions programmatic.

Conclusions

This study made it possible to trace the socio-demographic profile of adolescents pregnant women and their newborns in the municipality of Alvorada, Rio Grande do Sul.The results confirm that teenage pregnancy is more frequent in adolescents with low schooling, unmarried and not engaged in paid work.

Although the pregnancy occurs without planning and at an early age, in regarding of prenatal care, an adequate average of consultations was observed. The average weight birth of newborns was also within the normal range and five newborns had congenital anomaly at birth.

The study also made it possible to identify the association statistically significant difference between the number of prenatal consultations and the adequate birth weight of neonates in a positive way for the age of the pregnant women and life context.

Finally, in view of the high prevalence of teenage pregnancy, it is necessary to important to include this theme in the health services agenda, implementing adolescent pregnancy prevention programs in the municipality researched.

Authors contributions

Comin GEC participated in the conception, design, search and statistical analysis of research data, interpretation of results, writing of the scientific article. Riegel F participated in the statistical analysis of the research data, interpretation of results and writing of the scientific article. Cicolella participated in the design, statistical analysis of research data, interpretation of results. Mariot MDM participated in the conception, design, statistical analysis of research data, interpretation of results, writing of the scientific article And study coordination.

Conflicts of interest

No financial, legal or political conflicts involving third parties (government, companies and private foundations, etc.) was declared for any aspect of the work submitted (including, but not limited to grants and financing, participation in advisory board, study design, manuscript preparation, statistical analysis, etc.).

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