

CLINICAL AND SOCIAL IMPACT OF BRAZILIAN TEENAGE PREGNANCY

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Abstract

Objectives: To verify the correlation between low birth weight, prematurity, number of prenatal visits and type of delivery and maternal age (Adolescents versus young adults), in the city of Salvador – Bahia, Brazil; and in the whole Brazilian territory, in 2011. **Methods:** Population based study, descriptive and comparative, based on secondary data available in the database of the Information System on Live Births (SINASC), which was generated by the Department of the Health System of Brazil (DATASUS). The group analyzed comprises all the newborn children of parturients aged between 10 and 34 years. The variables were categorized as: maternal age (10-14; 15-19 and 20-34 years-old); delivery route (vaginal or cesarean); birthweight (< 2,500g; between 2,500g and 3,999g; ≥ 4000g); number of prenatal visits (None, 1 to 6, ≥ 7). **Results:** There was a downward trend in vaginal delivery, in Salvador and in Brazil, among the three groups analyzed. Prematurity rates (<37 weeks) as well as low birth weight rates (< 2,500g) in Salvador were higher than those in Brazil in both age groups studied. In Brazil, the rates of individuals who attended the ideal minimum number of prenatal care program were 42.1% among adolescents (10-14 years old) and 65.4% among young adults (20-34 years old) women. In Salvador, those rates were 15% and 19%, respectively. **Conclusion:** Pregnant adolescents from Brazil, and Salvador also, had higher rates of prematurity, low birth weight and lower adherence to prenatal care program compared with women in the age range considered ideal for pregnancy.

Keywords: Adolescent health; Pregnancy; Prenatal care; Premature.

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INTRODUCTION

According to the World Health Organization, the adolescent period corresponds to the age group between 10 and 19 years-old.⁽¹⁾ A teenage pregnancy occurs in a body that is still in physical and emotional development, and it may cause adverse maternal and neonatal effects. Studies have shown a positive correlation between the increased incidence of prematurity, low birth weight (LBW), low number of prenatal visits, intrauterine growth restriction, anemia, preeclampsia, acute fetal distress, increased incidence of cesarean delivery, and teenage pregnancy.^(2,3,4)

The objective of this study was to evaluate the correlation between maternal age range [adolescents (10-19 years) versus adults in the age range considered ideal for pregnancy (20-34 years old)⁽⁵⁾] and preterm birth, LBW, number of prenatal visits, and cesarean section incidence in the year 2011 in the Brazilian population. We also evaluated the frequency of teenage pregnancy and the associations cited above in the city of Salvador, the capital of the state of Bahia, Brazil, and compared it to the Brazilian data of 2011.

METHODS

Population based study, descriptive and comparative, based on secondary data available in the database of the Information System on Live Births (SINASC), which is generated by the Department of the Health System of Brazil (DATASUS), available in the website <http://tabnet.datasus.gov.br/cgi/defthtm.exe?sinasc/cnv/nvuf.def>. Records were selected for children of mothers 34 years-old or younger from Salvador-Bahia and Brazil in the year 2011. The independent variable was maternal age: 10-14 years, 15-19 years, 20-34 years; and the dependent variables were: type of delivery (vaginal or cesarean); gestation duration (<32 weeks, ≥ 32 and <37 weeks, ≥ 37 weeks); birthweight (<2,500g, 2,500g between 3.999g ≥ 4000g); number of prenatal visits (none, 1 to 6, and ≥ 7).

The Data was analyzed statistically with SPSS 16.0 for Windows (SPSS, Chicago, IL, USA).

RESULTS

Of the live births in Brazil during 2011 (n=2,913,160); 27,785 (0.95%) corresponded to children of mothers from 10-14 years of age; 533,103 (18.3%), from mothers of 15-19 years; and 2,034,666 (69.8%), from mothers of 20-34 years-old. In Salvador city there were 37,393 live births in 2011: 291 (0.8%) corresponded to children of mothers from 10-14 years of age; 5,613 (15%) from mothers of 15-19 years; and 26,095 (69.7%) from mothers of 20-34 years-old.

The vaginal delivery rate in Salvador tended to decline over the three age groups analyzed, comprising 70%, 70.4% and 48.9%, between 10-14 years, 15-19 years and 20-34 years, respectively. The same trend was observed in Brazil: 60% of vaginal delivery in adolescents and 43.59% in adult women, totaling 10% and 5.3% less than in Salvador, in the respective age groups (Table 1).

Preterm births rates in Brazilian women ranged from 16.5% in adolescents aged between 10 and 14 years, to 9.4% among women aged between 20 and 34 years-old. In Salvador these rates were approximately 18% in adolescents and 11.3% among adult women.

The rate of low birth weight in Brazil was 12.6% in youngsters between 10 and 14 years-old, 9.1% in youngsters aged between 15 and 19 years-old, and 7.7% in adult women. All of these rates were lower than those rates observed in Salvador (Table 1).

Brazil has a rate of 42.1% of adolescents aged between 10-14 years and 65.4% of adult women aged between 20-34 years who reach the minimum number of prenatal visits recommended by the Brazilian Ministry of Health (6 queries). In Salvador, the percentages of women who reach the minimal number of prenatal visits were 15% and 19% lower respectively for those age groups (Table 1).

Table 1. Comparison of obstetric characteristics of adolescent versus adult parturients attended in the city of Salvador, Bahia, during the year 2011

VARIABLES		MATERNAL AGE (YEARS)		
		10 - 14	15 -19	20 - 34
GESTATIONAL AGE (WEEKS)	< 37	177%	13%	113%
	· 37	823%	87%	887%
NUMBER OF PRENATAL VISITS	None	10,4%	7,1%	4,9%
	1 - 6	657%	666%	449%
	· 7	239%	263%	502%
BIRTH WEIGHT (GRAMS)	< 2499	16%	12%	97%
	2500 a 3999	82%	855%	843%
	· 4000	2%	25%	6%
DELIVERY ROUTE	Vaginal	704%	70%	489%
	Cesarean	296%	30%	511%

Source: <http://www.tabnet.saude.salvador.ba.gov.br> accessed in March/2014

DISCUSSION

In Brazil, as in Salvador, it was observed that lower maternal age is associated with higher rates of low birth weight, preterm delivery and lower adherence of prenatal care and cesarean delivery.

Both sites studied had a frequency of childbirth in teenagers far superior to developed countries,⁽⁶⁾ and worse pregnancy outcomes among teenagers' newborns than adults ones. However Salvador, the third most populous state capital city of Brazil, had even more rates of LBW, preterm delivery and an especially poor adherence to prenatal care program when compared with Brazilian rates.

A discrepant finding observed was the high percentage of adolescents in Salvador who had no prenatal visit. There is a consensus that good prenatal care reduces the occurrence of adverse maternal and infant outcomes.^(7,8)

Low prenatal adherence may have influenced the higher rates of low birth weight and prematurity observed in adolescents groups. LBW is one of the most important determinants of the chances of a newborn's survival and satisfactory growth and

development.⁽⁹⁾ Prematurity is associated with a substantial risk of neonatal and infant morbidity and mortality.^(7,10,11) Studies have shown that there is no impairment in the course of gestation and a newborn's conditions when pregnancy occurs in adolescence, as long as prenatal care is adequate.^(12,13)

Regarding the delivery route, it is important to emphasize that in all age groups analyzed rates of caesareans were higher than that recommended by the World Health Organization (WHO), which is 15%; and the average cesarean births among adolescents were twice or more than the WHO recommendation.⁽¹⁴⁾

The current study is based on a database analysis, and therefore it has limitations related to potential system filling failures. The substantial difference between adolescents and adult pregnancy outcomes (LBW and prematurity) highlights the need for health policies directed towards this population group, besides the improvement of prenatal care programs. Some conditions were associated with

poor adherence to prenatal care program among adolescents, such as: difficulties in accepting the pregnancy, family conflicts, and the lack of awareness of the importance of prenatal care.^(4,15-17) Therefore further studies to assess the reason for the low adherence of prenatal care among adolescents in Salvador should be conducted, and efforts should be made to initiate early prenatal care in young pregnant women in addition to supplying quality services with an adequate approach for this age group.

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