

ORIGINAL ARTICLE

# Age of first pregnancy in Brazil: data from the national health survey

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## Abstract

**Introduction:** The fertility pattern of the Brazilian population has changed considerably in recent decades. Socioeconomic and cultural inequalities can influence the age of first pregnancy, and the identification of these inequalities is a key aspect of monitoring and evaluating women's health care policies.

**Objective:** To analyze the age of women in their first pregnancy and related socioeconomic characteristics in Brazil.

**Method:** Cross-sectional study using data from the National Health Survey 2013, analyzing women from 18 to 49 years old and their age at first pregnancy, categorized by socioeconomic variables.

**Results:** The Northern Region presented the highest percentage of pregnancy for the 10 to 14 years old stratum. The first pregnancy at the age of 15-19 years obtained the highest percentages for all regions, with a significant difference between the North and Southeast regions. The Southeast region obtained the highest percentage of first pregnancy at the age of 30 to 39 years. The first pregnancy at the age of 15-19 years was significantly higher among separated women; without instruction; and living in rural areas. The first pregnancy from 10 to 14 was associated with the largest number of births that a woman will have throughout her life, with a higher prevalence of 5 to 9 births.

**Conclusion:** In Brazil, a large proportion of first pregnancies still occur in adolescence. The states of the northern region stand out with lower average ages in the first pregnancy, and this event is related to the worst socioeconomic conditions.

**Keywords:** pregnancy, maternal age, women's health, health status disparities, epidemiology.

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## Authors summary

### Why was this study done?

This study was conducted to analyze the age at which the first pregnancy of Brazilian women occurs and its associated factors, based on the hypothesis that, in Brazil, the predominance of economic differentials would maintain spatially unequal fertility levels and patterns. Identifying inequalities is a key aspect of monitoring and evaluating women's health care policies.

### What did the researchers do and find?

From the analysis of data from the National Health Survey 2013, it was found that the age of first pregnancy in Brazil is below 29 years of age, a prominent proportion of pregnancies in the age group of 30-39 years. However, in the poorest regions of the country, the onset of pregnancy occurs in the early age groups. Women who had early pregnancies reported a higher number of deliveries throughout their lives, and were related to worse living conditions.

### What do these findings mean?

The findings show that teenage pregnancy is still a recurring fact in the poorest regions of the country, but there was also an increase in early pregnancies at late ages, another risky situation for maternal and neonatal life, which requires an adequate assistance to the gestation of these extremes of age, with better family and prenatal planning guidelines and effective approach to risk situations.

## INTRODUCTION

The change in fertility behavior in Latin America, which began in the late twentieth century, encompasses a number of global factors that have conditioned the final size of offspring<sup>1</sup>. Among these changes, we highlight the social changes that women have been processing, from the break with the classic and exclusive social role assigned to them by motherhood, introducing themselves in the labor market and broadening their aspirations for citizenship. Controlling fertility and practicing contraception became the aspirations of women, as well as the full experience of sexuality, disconnecting motherhood from desire and sexual life, resulting in a decrease in the number of children per woman<sup>2</sup>.

In Brazil, throughout the 1960s and subsequent decades, constant reductions in fertility rates were observed, which would mark the beginning of new changes in the country's demographic structure<sup>3</sup>. The fertility rate in Brazil went from 6.2 children per woman in the 1940s; to 5.8 in 1970. In 2004, the fertility rate in Brazil reached the level of population replacement, with an average of 2.1 children per woman<sup>4-6</sup>. A survey indicated that fertility in the country would be around 1.8 in the 2002-2006 period<sup>7</sup>.

In developed countries, where the demographic transition process is already well established, it is possible to see the impact of this process on the age profile in the first pregnancy. From data presented in the 2011 Census of the Office for National Statistic (London and Wales, United Kingdom), 56% of births occur at a maternal age of 25-34 years and 24% represent the births of younger, younger mothers of 25 years old; in 2011 the standardized average age of all mothers who gave birth was 29.7 years, while the average standardized age of women who had their first child in 2011 was estimated to be 27.9 years<sup>8</sup>.

In the year 2000 in Brazil, approximately 10% of all births occurred in women 35 years and older. In the United States between 1991-2001, the percentage of women who had their first pregnancy at 35-39 years increased by 36% and at 40-44 years by 70% which is equivalent to an increase of 3%-4% per year. In Sweden, the average age of a woman at first pregnancy in 1973 was 24 years old, from 2003 to 28 years old. The percentage of primiparous women over 35 in this same period increased from 2% to 10%. In Japan, maternal age increased from 25.6 to 28 years between 1970 and 2000<sup>9</sup>.

In Brazil, a concentration of births is expected around a small age range (increasingly older), although high fertility rates remain among adolescents. This situation reflects a complex and multifactorial public health problem, as socioeconomic and cultural inequalities may influence different fertility patterns in the Brazilian population<sup>10,11</sup>.

Early pregnancy is related to complications during pregnancy, childbirth and the puerperium. In addition to the psychosocial repercussions, such as taking on new responsibilities, taking care of a family, reduces the chances of continuing education and, consequently, the opportunities to obtain better qualified and paid work, more demanding with education, training and professional skills and therefore further from the reach of economically and intellectually disadvantaged populations<sup>11,12</sup>. Studies analyzing teenage pregnancy show a higher recurrence of pregnancy up to two years after the end of a teenage pregnancy, and in general, these adolescents had total financial dependence, family income up to a minimum wage, who reported previous abortion and had low schooling<sup>10</sup>.

In contrast, the tendency to increase the incidence of late pregnancies in Brazil and worldwide. Data from the Live Birth Information System (SINASC) show that in 2000, of the total live births, 8.6% came from late pregnancies, while in 2014, this number rises to 12.2%<sup>13</sup>. Emphasizes attention to obstetric complications with a higher risk of maternal morbidity and mortality<sup>14</sup>. Women over the age of 35 have a higher frequency of adverse perinatal outcomes when compared to women under age of 35, especially prematurity, low birth weight, hypertension/preeclampsia, and low Apgar score<sup>13</sup>. On the other hand, women over 35 can enjoy a higher socioeconomic status, as well as have more stable behavioral and emotional conditions, which are essential for good pregnancy<sup>15</sup>.

Economic aspects and cultural attributes are known to determine the reproductive behavior of populations. In Brazil, the predominance of economic differentials would maintain spatially unequal fertility levels and patterns<sup>2</sup>.

Given the scenario of social organization and demographic transition in Brazil, from the perspective of addressing the pregnancy phenomenon, the identification of inequalities is a fundamental aspect of monitoring and

evaluation of women's health care policies. Thus, the objective is to analyze the age at which the first pregnancy of Brazilian women occurs and its related factors.

## METHODS

This is a descriptive cross-sectional study<sup>16</sup> with data from the National Health Survey 2013 - PNS 2013, conducted by the Brazilian Institute of Geography and Statistics (IBGE) Foundation in partnership with the Ministry of Health (MS) and the Instituto Oswaldo Cruz Foundation (Fiocruz). The research target population consisted of adult residents ( $\geq 18$  years old), residing in private households throughout the national territory, excluding special census tracts (barracks, military bases, housing, camps, vessels, penitentiaries, penal colonies, prisons, jails, nursing homes, orphanages, convents and hospitals).

The sample size was defined considering the desired level of precision for the estimates of some indicators of interest. The minimum size defined for the sample was 1,800 households per Federative Unit. The PNS drew a total of 81,187 households, with one individual per household being selected. After collection was completed, interviews were conducted in 64,348 households, resulting in a non-response rate of 8.1%.

The sampling plan employed was that of cluster sampling in three stages, with stratification of the primary sampling units. The census tracts or set of sectors make up the primary sampling units (UPA), households represent the second stage units, and adult residents define the third stage units.

Sample weights were defined for the UPAs, for the households and all their residents, and the weight for the selected resident. The latter was calculated considering the weight of the corresponding household, the probability of selection of the resident, non-response adjustments by gender and calibration by population totals by sex and age classes, estimated with the weight of all residents.

All considerations on the sampling plan, weights and effects of the PNS design can be obtained from previous publications<sup>17</sup>.

The PNS questionnaire was divided into modules, which include household characteristics of all residents (education, income, work, people with disabilities, health insurance coverage, use of health services, health of children under two years of age, health of the elderly) and of the selected adult resident (lifestyles, health status perception, accidents and violence, chronic diseases, women's health, prenatal care, oral health and medical care).

Through Module R, the PNS addressed the theme "Women's Health", including questions about preventive examinations, reproductive history and family planning. The questions of interest of the present study are related to the average age of women 18 to 49 years old when they had their first pregnancy. For the purpose of the present research, the analyzed variable was: "At what age did you have your first pregnancy?", who responded positively to the question: "During your lifetime, have you ever become

pregnant (even if the pregnancy did not come to an end)?" , excluding cases where the answer to the question was "Don't Know" and "Not applicable - 50 year old or older or who have never been pregnant". The variable "age at first pregnancy" was divided into 5 categories: "10 to 14 years old", "15 to 19 years old", "20 to 29 years old", "30 to 39 years old", "40 to 49 years old".

The variables studied were described according to the following sociodemographic variables: macroregions (North, Northeast, Southeast, South and Midwest), Federation Units (26 states and the Federal District), level of education (no education/incomplete elementary school, complete elementary school/incomplete high school; complete high school/higher incomplete and higher complete); race/skin color (white; black; yellow and brown); marital status (single; married; separated; divorced and widowed); place of residence (urban and rural); number of births (no births; 1 births; 2 births; 3 births; 4 births; from 5 to 9 births and with 10 or more births).

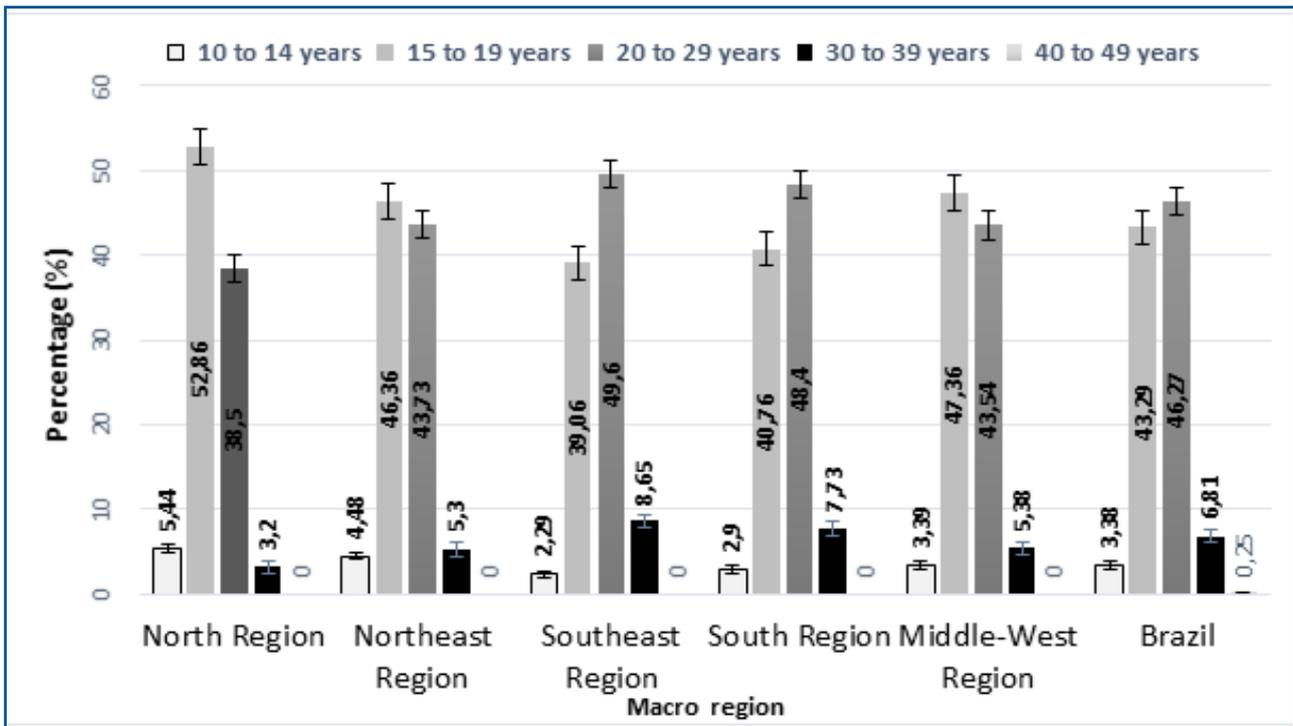
The present study evaluated the PNS data that were available on the DATASUS18 and the analyzes were performed between April and May 2017. Data were presented from proportions, means and confidence interval of 95% values. Significant differences were observed from the comparison between the confidence intervals of the observed proportions.

The National Health Research project was approved by the National Research Ethics Commission (CONEP) on July 8, 2013, under No. 10853812.7.0000.0008. The present work is a research that used secondary data available on official websites of the Brazilian Ministry of Health, being exempted from consideration by the research ethics committee, in accordance with Resolution 466/2012 of the National Health Council.

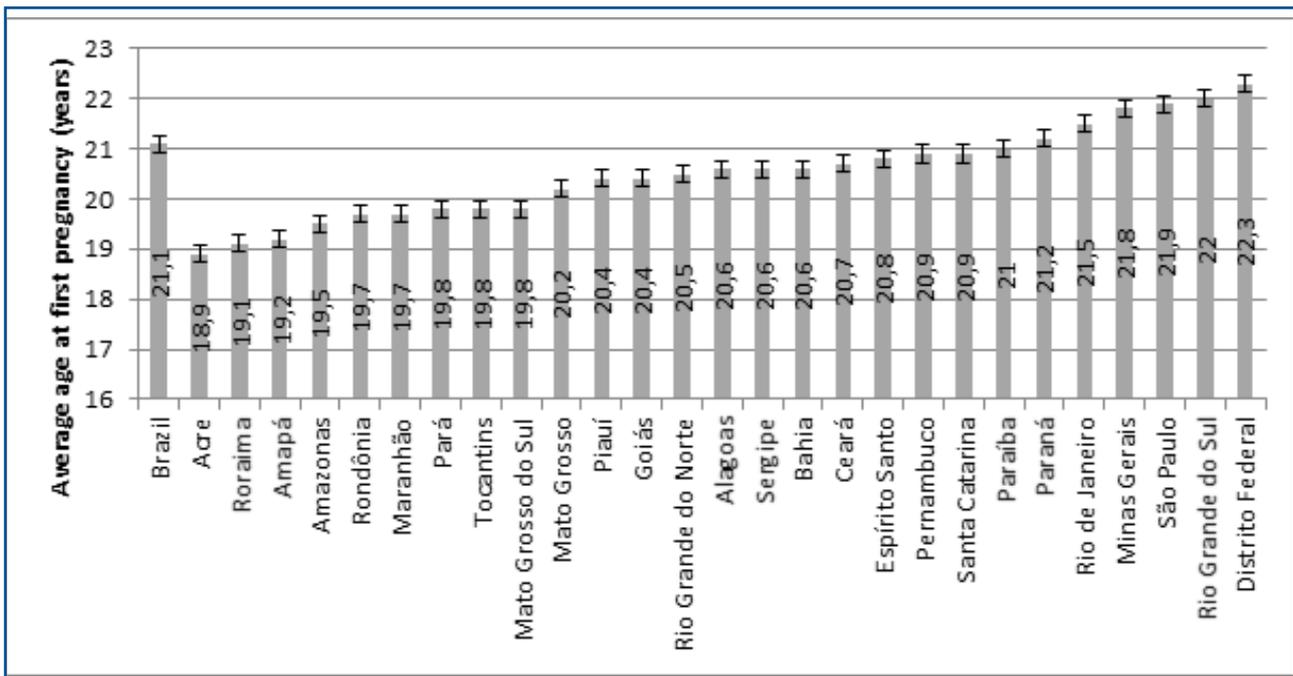
## RESULTS

The analysis of the age of first pregnancy by regions of Brazil shows that the Northern Region has the highest percentage of pregnancy for the 10 to 14 years old stratum 5.44% (95% CI 4.27-6.62). The first pregnancy at the age of 15-19 years obtained the highest percentages for all regions, with significant difference between the North (52.86%; 95% CI 50.24-55.48) and Southeast (39,06% IC95% 36,40-41,73) regions. The Southeast region (8.65%; 95% CI 7.33-9.97) presented the highest percentage of first pregnancy at the age of 30 to 39 years, being lower in the North (3.2%; 95% CI 2.33-4.06), as shown in Figure 1.

The average age of first pregnancy by Federation Unit was significantly lower in the states of Acre (95% CI 18.6-19.3), Roraima (95% CI 18.6-19.6) and Amapá (95% CI 18.8-19,7), belonging to the Northern Region of Brazil. And only six states presented the age of first pregnancy above the national average, such as Paraná (95% CI 20.5-21.9), Rio de Janeiro (95% CI 21.1-21.9), Minas Gerais (95% CI 21.1-22.4), Sao Paulo (95% CI 21.5-22.3), Rio Grande do Sul (95% CI 21.4-22.6) and Federal District (95% CI 21.7-22.9) (Figure 2).



**Figure 1:** Percentage of first pregnancy by age group in the Regions of Brazil. National Health Survey, 2013.  
\*Note: the stems represent the 95% confidence intervals of the percentages presented.



**Figure 2:** Average age of women at first pregnancy by Federation Unit. National Health Survey, 2013.  
\*Note: the stems represent the confidence intervals of 95% of the values presented.

Table 1 shows the percentage of first pregnancy by age stratum according to sociodemographic factors. The prevalence of first pregnancy was significantly higher at the age of 20 to 29 years among married women (53.25%; 95% CI 51.20-55.31); in the two highest levels of education (57.01% with complete higher education 95% CI 53.04-60.97; and 55.94% with complete high and incomplete higher educations 95% CI 53.73-58.15), in the white-skinned race (50.83%; 95% CI 48.62-50.04.04) and residing in urban areas (47.14%; 95% CI 45.62-48.67).

For the age of 15-19 years, the prevalence of first pregnancy in this age group was significantly higher among separated women (52.16%; 95% CI 42.05-62.26); in the two lowest levels of education (56.46% without education/incomplete elementary school 95% CI 54.20-58.73; and 51.72% with complete elementary and incomplete high schools 95% CI 48.63-54.81); mixed race (48.88%; 95% CI 47.04-50.72) and residing in rural areas (50.19%; 95% CI 47.25-5.13).

**Table 1:** Percentage of first pregnancy by age group according to sociodemographic variables. National Health Survey, Brazil, 2013.

Variables	10 to 14 years	15 to 19 years	20 to 29 years	30 to 39 years	40 to 49 years
	CI 95% <sup>a</sup>				
Marital status					
Married	1.96 (1.44-2.58)	36.04 (33.99-38.08)	53.25 (51.20-55.31)	8.47 (7.44-9.50)	-
Separated	-	52.16 (42.05-62.26)	40.58 (31.38-49.77)	-	-
Divorced	2.22 (1.06-3.38)	39.43 (33.78-45.09)	48.95 (43.23-54.67)	9.35 (5.55-13.15)	-
Widow	-	50.91 (41.71-60.12)	42.26 (33.27-51.26)	-	-
Single	5.29 (4.42-6.16)	51.15 (49.19-53.10)	38.47 (36.50-40.44)	4.82 (4.07-5.58)	-
Instruction level					
No instruction/ incomplete elementary school	6.91 (5.80-8.01)	56.46 (54.20-58.73)	33.08 (30.92-35.25)	3.38 (2.66-4.10)	-
Complete elementary school/ Incomplete high school	2.77 (2.01-3.53)	51.72 (48.63-54.81)	41.72 (38.60-44.83)	3.76 (2.77-4.74)	-
Complete high school/ Incomplete higher education	1.69 (1.13-2.26)	35.5 (33.35-37.64)	55.94 (53.73-58.15)	6.58 (5.67-7.49)	-
Complete higher education	-	21.65 (18.09-25.22)	57.01 (53.04-60.97)	20.3 (17.2-23.3)	-
Skin color or race					
White	2.46 (1.84-3.08)	37.06 (34.80-39.32)	50.83 (48.62-53.04)	9.18 (7.98-10.39)	-
Black	4.72 (3.13-6.31)	45.34 (40.81-49.86)	44.52 (40.23-48.81)	5.28 (3.63-6.93)	-
Yellow	-	36.65 (22.49-50.81)	41.07 (26.41-55.73)	-	-
Mixed	3.96 (3.34-4.58)	48.88 (47.04-50.72)	49.77 (34.89-64.65)	4.66 (4.04-5.27)	-
Place of Residence					
Urban	3.1 (2.63-3.58)	42.14 (40.55-43.73)	47.14 (45.62-48.67)	7.34 (6.62-8.06)	0.28 (0.14-0.42)
Rural	5.06 (4.00-6.12)	50.19 (47.25-53.13)	41.02 (37.87-44.18)	3.64 (2.71-4.57)	-

<sup>a</sup>95% CI: 95% confidence interval

Table 2 shows that early pregnancy is associated with the greater number of births a woman will have throughout her life. The percentage of births by age group indicates that the first pregnancy aged 10 to 14 years had

the highest prevalence of 5 to 9 births (20.7%; 95% CI 15.13-26.3). The occurrence of a delivery was higher when the first pregnancy occurred between 30 and 39 years (65.1%; 95% CI 60.8-69.4).

**Table 2:** Percentage of the number of deliveries by age group of the first pregnancy. National Health Survey, Brazil, 2013.

Variable	10 to 14 years	15 to 19 years	20 to 29 years	30 to 39 years	40 to 49 years
	CI 95% <sup>a</sup>				
Number of births					
Non	-	2.13 (1.57-2.69)	4.92 (4.09-5.74)	8.24 (5.84-10.64)	-
1 birth	10.6 (6.75-14.50)	21.9 (20.26-23.54)	38.49 (36.47-40.51)	65.1 (60.8-69.4)	-
2 births	19.6 (14.9-24.4)	32.03 (30.05-34.01)	37.49 (35.62-39.36)	23.6 (19.6-27.6)	-
3 births	31.0 (25.0-37.1)	23.6 (21.87-25.33)	13.1 (11.75-14.44)	2.29 (1.30-3.29)	-
4 births	13.3 (9.54-17.1)	10.04 (8.89-11.18)	3.71 (2.89-4.53)	-	-
5 to 9 births	20.7 (15.13-26.3)	9.63 (8.49-10.78)	2.23 (1.65-2.82)	-	-
10 births or more	-	0.68 (0.34-1.01)	-	-	-

<sup>a</sup>95% CI: 95% confidence interval

## DISCUSSION

This study found that the age of first pregnancy in Brazil is concentrated in the age group of 15 to 29 years old. The major regional differences stand out: in the poorest regions of the country, the beginning of pregnancy occurs in the early age groups; In more developed regions, the age

of first pregnancy is in the range of 20-29 years, with high percentages of pregnancies between 30-39 years.

The early onset of the reproductive process, characterized by a relatively high fertility pattern for women under 20 years of age, due to the reduction in the birth rate in Brazil, was observed for the 15-19 year-old cohorts in the National Demographic Survey and Health 2006, which

was considered a mechanism of “compensation”, because a high fertility among adolescents would cause the rates to be extremely low at other ages, to keep a small number of children at the end<sup>7</sup>.

Brazil is among the 10 countries with the highest prevalence of teenage pregnancy in absolute terms in the world. In recent decades, the total fertility rate has fallen markedly, from 6.3 children per woman in the early 1960s to 1.8 per woman in 2002-2006. However, the reduction in fertility has been slower among adolescents compared to adults in the same living conditions. In 2006, 39 out of every 1,000 women aged 10-19 years had children in 2006, which meant a slight reduction from 45 per 1,000 in 1996; while among those aged 10 to 14 there was a slight increase from 3 to 4 births per 1,000 women over the same period<sup>19</sup>.

In Brazil in 1984, the average age of onset of sexual life was 16 years old among women aged 16-19. Already in 1998, the median age verified decreased to 15 years. In addition, the number of male adolescents who had their first sexual intercourse until the age of 14 was 35.2% in 1984, while in 1998 this percentage rose to 46.7%. Regarding the estimate of women who had their first sexual intercourse before the age of 14 practically doubled between 1984 and 1998 (13.6% and 32.3%, respectively)<sup>20</sup>. Depending on the phenomenon, the anticipation of the onset of reproductive sex seems to be related to the low level of education and non-adherence to contraceptive methods and, consequently, to the onset of the first pregnancy<sup>21</sup>.

In countries with complete statistical data, the pregnancy rate among 15- to 19-year-olds was highest in the United States (57 pregnancies per 1,000) and the lowest in Switzerland (8 per 1,000). For adolescents aged 10 to 14 years, the lowest pregnancy rate occurred in Switzerland (0.09 per 1,000) and the highest was in Hungary (1.19 pregnancies per 1,000) and in the United States (1.08 per 1,000)<sup>22</sup>.

In Brazil in 2011, ¼ of births occurred among girls under 19, with a higher percentage for girls under 15. The highest rates corresponded to the North regions, 1.6% in the 10 to 14 years age group and 25% at 15 to 19 years old, and the Northeast, 1.3% in the 10 to 14 years old group and 21% at 15 to 19 years old<sup>23</sup>, confirming the higher prevalence of teenage pregnancy in the poorest regions of the country.

In a study conducted at a maternity hospital in João Pessoa, Paraíba, Brazil, in 2014, with the objective of knowing the epidemiological characteristics of 400 puerperal women, the authors reported that the prevalence of pregnancy was 9.75% in the age group between 12 and 14 years, 34% for 15 and 17 years, 23,25% between 18 and 20 years and 33% in women 20 years and older; The early pregnancy was associated with the origin of the urban area and the low level of education of the pregnant woman<sup>24</sup>.

By analyzing interurban disparities in the municipality of São Carlos, São Paulo, Brazil, through georeferencing, it reinforces teenage pregnancy as a phenomenon of social reproduction, with spatial correlation between the prevalence of teenage pregnancy and areas of greater social vulnerability, indicating that education, work, gender relations are the main social vulnerabilities

in this territory, besides being related to child morbidity and mortality<sup>25</sup>.

In the case-control study in nine cities in the 5 Brazilian regions, it was found that poverty alone is not a determinant for teenage pregnancy, but rather the result of a combination of multiple variables. In this study, teenage pregnancy was associated with being married/stable union, partner as family provider, age of first sexual intercourse, use of contraceptive methods, repetition and expulsion from school, alcohol and drug use, poor family relationships and higher frequency of negative life events<sup>26</sup>.

When we analyzed the sociodemographic factors associated with the age of first pregnancy, the association of age between 20-29 years and married marital status was similar in the study by Coelho *et al.*<sup>27</sup>, which evaluated pregnant women regarding pregnancy planning, predominance of women with an average age of 24 years and married/stable union (67%); This study found that among women under the age of 20, those who did not plan their pregnancies (30.7%), who had twice the planned ones (14.1%) stood out. For those aged 20 years and over, the highest percentage was among those who planned pregnancy (85.9%).

Lower education among women who became pregnant in adolescence was also observed in a study that evaluated pregnant adolescents from a prospective cohort from 2005 to 2007 in western São Paulo, Brazil. The authors point out that education is a proxy for lifelong socioeconomic status and pregnancy can disrupt schooling. A possible explanation for pregnancy among under-educated adolescents and unfavorable socioeconomic conditions is the difficult access to information and health services and, consequently, to contraceptive methods<sup>28</sup>.

We also observed that among the teenagers who became pregnant, the ‘separated’ marital status predominated. This finding may be related to the failure of marital status in this age group, showing the marriage increasingly early. Furtado *et al.*<sup>29</sup> found in research on childbirth care of young people in the Northeast region of Brazil, 77.6% of participants between 12 and 24 years reported having marital ties, as well as education to primary education (54.6%) and belonging to lower economic classes (50.7%).

Regarding the skin color of adolescents who get pregnant, the higher prevalence of non-whites among those who get pregnant earlier is corroborated by research that evaluated puerperal women in southeastern Brazil according to color, using data from the national survey Born in Brazil 2011-2012. This study found a higher proportion of women in the age group of 12 to 19 years old among brown (18.6%) and black (18.4%), as well as unfavorable differences among blacks and browns regarding education, income and to paid work. The authors also noted that, despite the inclusive decade, important differences still persist in sociodemographic characteristics, access and quality of care provided to women during the puerperal pregnancy period, in terms of racial inequalities<sup>30</sup>.

Our study showed a remarkable proportion of pregnancies in the age group of 30-39 years, which is in line with the worldwide trend of maternity postponement. The Ministry of Health considers high-risk pregnancies in

pregnant women 35 years of age or older, referred to as late or advanced age, and are more susceptible to developing complications during pregnancy<sup>31</sup>.

However, women who plan to have advanced pregnancies find themselves mature and prepared in both financial and psychological aspects to conceive. They show hope for favorable outcomes during pregnancy, even with the insecurity of the lack of information about gestational risks and the lack of signs and symptoms of these risks, and although they feel little taken care of by health professionals during this period. They have been conducted with this new phase of life, but with the need to reorganize the daily activities and family<sup>32</sup>.

The high number of deliveries throughout life associated with early onset of pregnancy was evidenced in this research. The recurrence of teenage pregnancy is confirmed in the study by Nery *et al.*<sup>10</sup>, which investigated 639 women aged 17 to 22 years in Piauí, with 87.9% reporting the first pregnancy between 15 and 19 years, showing the prevalence of recurrence of pregnancy, within two years after the termination of a pregnancy, 25.9% in the capital and 35.4% in the countryside.

A systematic meta-analysis review points out that the use of contraception, especially reversible long-acting contraceptives, considerably reduces the risk of repeated early pregnancy. Education-related factors, which included higher levels of schooling and continuation in school, are considered protective of recurrence of pregnancy. On the other hand, depression and a history of miscarriage, increase the risk of repeat teenage pregnancy<sup>33</sup>.

Some limitations should be noted in the assessment of the results presented here, regarding the validity and reproducibility of the indicators presented, although this study is conducted by the National Health Survey, with proven methodological validity, it is self-reported information by the interviewees, and may occur differences in the interviewees' comprehension, reminiscent bias,

underestimation or overestimation of the referred values. In addition, the theme is surrounded by ethical, moral and cultural issues, and these factors strongly influence the response. However, population surveys provide us with representative samples of the population from all regions of the country, and can serve to compare these results with those of other countries, and support the organization of public policies aimed at minimizing the problem.

The findings of the present study are particularly important as it addresses an important aspect of characterizing the Brazilian demographic transition. They also show that the high adolescent fertility in Brazil has broader dimensions, and to confront and obtain more efficient results, actions would be needed to increase or optimize resources to compensate for previous social differences, transcending the health sector, requiring practices and intersectoral knowledge. From the findings of the present study, it was possible to present regional and sociodemographic disparities in relation to the age of first pregnancy, with a higher prevalence of early pregnancies in regions considered poor, which may reflect less access to education and health care, in addition to cultural factor of early marriage and the desire to have children.

Teenage pregnancy is a human and social phenomenon in different cultures, with increased risk related to physical, emotional, economic and social dependence of these girls. Also, a greater risk of violence in all its forms, associated with the lack of autonomy of these mothers to make their own decisions. It represents a gender and vulnerability issue that reflects all types of inequality. The results of this study also describe an increase in early pregnancies at later ages, another risky situation for maternal and neonatal life, which requires adequate care for the gestation of these extremes, with better family and prenatal planning guidelines and effective approach to risk situations.

## ■ REFERENCES

1. Wong LLR, Bonifácio GM. Retomada da queda da fecundidade na América Latina. Evidências para a primeira década do século XXI. *Rev Latinoamericana Población*. 2009; 3(4-5):93-121.
2. Costa AM, Guilhem D, Silver LD. Planejamento familiar: a autonomia das mulheres sob questão. *Rev Bras Saúde Mater Infant*. 2006;6(1):75-84. DOI: <https://dx.doi.org/10.1590/S1519-38292006000100009>
3. Duarte EC, Barreto SM. Transição demográfica e epidemiológica: a Epidemiologia e Serviços de Saúde revisita e atualiza o tema. *Epidemiol Serv Saúde*. 2012;21(4):529-32. DOI: <https://dx.doi.org/10.5123/S1679-49742012000400001>
4. Instituto Brasileiro de Geografia Estatística (IBGE). Síntese de Indicadores sociais: uma análise das condições de vida da população brasileira. Estudos e pesquisas. Informações demográficas e socioeconômicas. Rio de Janeiro: IBGE, 2012.
5. Mendes ACG, Sá DA, Miranda GMD, Lyra TM, Tavares RAW. Assistência pública de saúde no contexto da transição demográfica brasileira: exigências atuais e futuras. *Cad Saúde Pública*. 2012;28(5):955-64. DOI: <https://dx.doi.org/10.1590/S0102-311X2012000500014>
6. Closs VE, Schwanke CHA. A evolução do índice de envelhecimento no Brasil, nas suas regiões e unidades federativas no período de 1970 a 2010. *Rev Bras Geriatr Gerontol*. 2012;15(3):443-58. DOI: <http://dx.doi.org/10.1590/S1809-98232012000300006>
7. Brasil. Pesquisa Nacional de Demografia e Saúde da Criança e da Mulher (PNDS) 2006: dimensões do processo reprodutivo e da saúde da criança. Brasília: Ministério da Saúde, 2009.

8. Office for National Statistics. Live Births in England and Wales by Characteristics of Mother 1 Statistical bulletins. [cited 2019 May 28] Available from: <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/livebirths/bulletins/livebirthsinenglandandwalesbycharacteristicsofmother1/previousReleases>
9. Takagi MM, Jorge SRPF, Rodrigues LP, Yamano LM, Piato S, Aoki T. Resultados perinatais em gestantes acima de 35 anos. *Arq Med Hosp Fac Cienc Med Santa Casa São Paulo*. 2010;55(3):108-14.
10. Nery IS, Gomes KRO, Barros IC, Gomes IS, Fernandes ACN, Viana LMM. Fatores associados à reincidência de gravidez após gestação na adolescência no Piauí, Brasil. *Epidemiol Serv Saúde*. 2015;24(4):671-80. DOI: <http://dx.doi.org/10.5123/S1679-49742015000400009>
11. Dias ACG, Teixeira MAP. Gravidez na adolescência: um olhar sobre um fenômeno complexo. *Paidéia*. 2010;20(45):123-31. DOI: <http://dx.doi.org/10.1590/S0103-863X2010000100015>
12. Yazlle MEHD. Gravidez na adolescência. *Rev Bras Ginecol Obstet*. 2006;28(8):443-5. DOI: <http://dx.doi.org/10.1590/S0100-72032006000800001>
13. Alves NCD, Feitosa KMA, Mendes MES, Caminha MDFC. Complicações na gestação em mulheres com idade maior ou igual a 35 anos. *Rev Gaúcha Enferm*. 2017;38(4):e2017-0042. DOI: <http://dx.doi.org/10.1590/1983-1447.2017.04.2017-0042>
14. Gonçalves ZR, Monteiro DLM. Complicações maternas em gestantes com idade avançada. *Femina*. 2012;40(5):275-9.
15. Lopes MN, Dellazzana-Zanon LL, Boeckel MG. A multiplicidade de papéis da mulher contemporânea e maternidade tardia. *Temas Psicol*. 2014;22(4):917-28. DOI: <http://dx.doi.org/10.9788/TP2014.4-18>
16. Zangirolami-Raimundo J, Echeimberg JO, Leone C. Research methodology topics: cross-sectional studies. *Journal of Human Growth and Development*. 2018;28(3):356-60. DOI: <http://dx.doi.org/10.7322/jhgd.152198>
17. Souza-Júnior PRB, Freitas MPS, Antonaci GA, Szwarcwald CL. Desenho da amostra da Pesquisa Nacional de Saúde 2013. *Epidemiol Serv Saúde*. 2015;24(2):207-16. DOI: <https://dx.doi.org/10.5123/S1679-49742015000200003>
18. Brasil. Ministério da Saúde. DATASUS. Pesquisa Nacional de Saúde (PNS). [cited 2019 May 28] Available from: <http://www.datasus.gov.br/DATASUS/index.php?acao=1>
19. Santos N LDAC, Costa MCO, Amaral MTR, Vieira GO, Bacelar EB, Almeida, AHDVD. Gravidez na adolescência: análise de fatores de risco para baixo peso, prematuridade e cesariana. *Ciênc Saúde Coletiva*. 2014;19(3):719-6. DOI: <https://doi.org/10.1590/1413-81232014193.18352013>
20. Queiroga KRO, Farias MCAD, Casimiro GS, Nascimento ARS, Maia PCGG, Abrantes KSM, et al. What is and how can be explained pregnancy in adolescence. *J Hum Growth Dev*. 2014;24(2):142-9. DOI: <https://doi.org/10.7322/jhgd.81013>
21. Rosa AJ, Reis AOA, Tanaka ADA. Gestações sucessivas na adolescência. *J Hum Growth Dev*. 2007;17(1):165-72. DOI: <https://doi.org/10.7322/jhgd.19825>
22. Sedgh G, Finer LB, Bankole A, Eilers MA, Singh S. Adolescent pregnancy, birth, and abortion rates across countries: levels and recent trends. *J Adolesc Health*. 2015;56(2):223-30. DOI: <https://doi.org/10.1016/j.jadohealth.2014.09.007>
23. Rede Nacional da Primeira Infância (RNPI). Primeira infância e gravidez na adolescência. Fortaleza: Instituto da Infância, 2015.
24. Toscano MM, Paiva CSM, Nunesmaia HGS. Características epidemiológicas das puérperas internadas em maternidade pública de João Pessoa no ano de 2014. *Rev Fund Care Online*. 2017;9(2):503-9. DOI: <http://dx.doi.org/10.9789/2175-5361.2017.v9i2.503-509>
25. Ferreira RA, Ferriani MGC, Mello DF, Carvalho IP, Cano MA, Oliveira LA. Análise espacial da vulnerabilidade social da gravidez na adolescência. *Cad Saúde Pública*. 2012; 28(2):313-23. DOI: <http://dx.doi.org/10.1590/S0102-311X2012000200010>
26. Diniz E, Koller SH. Factors Associated with Pregnancy among Low-Income Brazilian Adolescents. *Paidéia*. 2012;22(53):305-14. DOI: <http://dx.doi.org/10.1590/S0103-863X2012000300002>
27. Coelho EAC, Andrade MLS, Vitoriano LVT, Souza JJ, Silva DO, Gusmão MEN, et al. Associação entre gravidez não planejada e o contexto socioeconômico de mulheres em área da Estratégia Saúde da Família. *Acta Paul Enferm*. 2012;25(3):415-22. DOI: <http://dx.doi.org/10.1590/S0103-21002012000300015>
28. Faisal-Cury A, Tabb KM, Niciunovas G, Cunningham C, Menezes PR, Huang H. Lower education among low-income Brazilian adolescent females is associated with planned pregnancies. *Int J Womens Health*. 2017;9:43-8. DOI: <https://doi.org/10.2147/IJWH.S118911>

29. Furtado EZL, Gomes KRO, Gama SGN. Acesso à assistência ao parto de adolescentes e jovens na região Nordeste do Brasil. *Rev Saúde Pública*. 2016;50:23. DOI: <http://dx.doi.org/10.1590/S1518-8787.2016050005396>
30. Diniz CSG, Batista LE, Kalckmann S, Schlitz AOC, Queiroz MR, Carvalho PCA. Desigualdades sociodemográficas e na assistência à maternidade entre puérperas no Sudeste do Brasil segundo cor da pele: dados do inquérito nacional Nascer no Brasil (2011-2012). *Saúde Soc*. 2016;25(3):561-72. DOI: <http://dx.doi.org/10.1590/s0104-129020162647>
31. Brasil. Ministério da Saúde. Secretaria de Atenção à Saúde. Departamento de Ações Programáticas Estratégicas. *Gestação de alto risco: manual técnico*. 5 ed. Brasília: Ministério da Saúde, 2012.
32. Aldrighi JD, Wall ML, Souza SR, Cancela FZ. The experiences of pregnant women at an advanced maternal age: an integrative review. *Rev Esc Enferm USP*. 2016;50(3):512-21. DOI: <http://dx.doi.org/10.1590/S0080-623420160000400019>
33. Maravilla JC, Betts KS, Cruz CCE, Alati R. Factors influencing repeated teenage pregnancy: a review and meta-analysis. *Am J Obstet Gynecol*. 2017;217(5):527-45.e31. DOI: <http://dx.doi.org/10.1016/j.ajog.2017.04.021>

## Resumo

**Introdução:** O padrão de fecundidade da população brasileira tem se modificado consideravelmente nas últimas décadas. As desigualdades socioeconômicas e culturais podem influenciar a idade da primeira gestação, e a identificação dessas desigualdades é um aspecto fundamental do monitoramento e avaliação das políticas de atenção à saúde das mulheres.

**Objetivo:** Analisar a idade das mulheres em sua primeira gestação e as características socioeconômicas relacionadas no Brasil.

**Método:** Estudo seccional que utilizou dados da Pesquisa Nacional de Saúde 2013, analisando mulheres de 18 a 49 anos e sua idade na primeira gestação, categorizada por variáveis socioeconômicas.

**Resultados:** A Região Norte apresentou o maior percentual de gravidez para o estrato de 10 a 14 anos. A primeira gravidez na idade de 15 a 19 anos obteve os percentuais mais elevados para todas as regiões, com diferença significativa entre as regiões Norte e Sudeste. A região Sudeste obteve o maior percentual da primeira gravidez na idade de 30 a 39 anos. A primeira gravidez na idade de 15 a 19 anos foi significativamente maior entre as mulheres separadas; sem instrução; pardas e que residem em área rural. A primeira gravidez de 10 a 14 esteve associado ao maior número de partos que a mulher terá ao longo da vida, com maior prevalência de 5 a 9 partos.

**Conclusão:** No Brasil, uma grande proporção da primeira gestação ainda ocorre na adolescência. Os estados da região norte se destacam com menores médias de idade na primeira gestação, além desse evento estar relacionado às piores condições socioeconômicas.

**Palavras-chave:** gravidez; idade materna, saúde da mulher, desigualdades em saúde, epidemiologia.

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