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Prevalence of Gestation in School Adolescents in Brazil and Associated Factors

Thaynara Maestri[1]*, Filipe Luis Merini[1], Thais Andressa Walber[1], Patrine Marchi Avosani[1], Sofia Santiago Freitas[2], Luan Junior Vignatti[3], Paulo Fontoura Freitas[4], Márcia Regina Kretzer[5]

[1]Medical student, Universidade do Sul de Santa Catarina, Palhoça, SC, Brasil.

[2]Nutritionstudent, Universidade do Sul de Santa Catarina, Palhoça, SC, Brasil.

[3]Resident, DepartmentofDermatology, Hospital São Lucas da PUCRS, Porto Alegre, RS, Brasil.

[4]PhD andPost-doctorate in Epidemiology, Universidade do Sul de Santa Catarina, Palhoça, SC, Brasil.

[5]PhD in Health Sciences, Universidade do Sul de Santa Catarina, Palhoça, SC, Brasil.

thaymaestri9@gmail.com

***Corresponding Author:** ThaynaraMaestri, Rua Brusque, 1007, Itajaí, SC, Brasil.*

Abstract

***Objectives:** To analyse the prevalence and factors associated with pregancy in school adolescents in Brazil.*

***Materials and Methods:** A cross-sectional study was carried out using data from the National School Health Survey (PeNSE), for the year of 2015. Female adolescents from 13 to 17 years of age were included. The dependent variable was pregnancy. The data were analyzed using SPSS 18.0, Chi-square test was applied and prevalence ratios (PR), with 95% CI were obtained, results were considered statistically significant when p value was less than 5%. A model of Multivariate Analysis by Logistic Regression was used, based on a Hierarchical Model.*

***Results:** The study included data concerning 11,850 adolescents. The prevalence of pregnancy among adolescents who had already started sexual activity was 11.5%. There was a predominance of non-white skin color (61.2%), age above 15 years (60.4%), studying at public schools (77.2%), not living with their mothers (12.8%), or with their fathers (38.5%) and, with a low level of maternal schooling (68.2%). Regarding the outcome, there was a statistically significant association between white skin color (adjusted RP: 2.39, p <0.001), age above 15 years (adjusted RP: 1.80, p: 0.014), day shift (adjusted RP: 2.01, p <0.001), not living with their mothers (adjusted PR: 2.67, p <0.001), not living with their fathers (adjusted PR: 1.49, p: 0.022), low maternal schooling (adjusted RP: 2.48, p<0,001) and relating sexual violence (adjusted PR: 2.13, p: 0.020).*

***Conclusion:** About 11% of school children who reported having already started sexual intercourse had already become pregnant. Associations were found between pregnancy and socio-demographic aspects, related to school, lifestyle habits and sexual behavior. The school can be seen as a conducive environment for the development of educational and socio-cultural health strategies.*

Keywords: *Pregnancy in Adolescence. Adolescent. Sexuality. Sexual and Reproductive Health.*

Introduction

The World Health Organization (WHO) defines adolescence as the period between 10 and 19 years of age[1]. In Brazil, the Statute of Child and Adolescent (Law nº 8.069/ 990) defines this age group as women aging between 12 and 18 years[2]. It is a phase of life characterized by physical, psychic, behavioral and social changes, as well as the maturation of sexual characteristics, which is associated with the onset of sexual activity and the risks of sexual transmission of infections and pregnancy[3].

About 16 million adolescents are delivering every year around the world. These newborns account for 11% of alllive births[4]. In Brazil, teenage pregnancy dropped from 19.3% in 2010 to 17% in 2016[5], yet it has the seventh highest rate in South America, with a rate of 68.4 pregnancies for every 15 to 19 years old[6].

For some of these young women, pregnancy and childbirth are planned and desired, but 80% of pregnancies conceived during adolescence are not intentional[4]. Adolescent pregnancy is associated with socioeconomic factors and life habits, such as low schooling and income, low maternal education[7], being married[8], not living with one or both parents, alcohol, tobacco and drug abuse[9], history of physical, psychological and sexual violence[10]. Sexual risk behaviors are also related to the precocity of pregnancy, such as the early onset of sexual life[11] and not knowing or not having access to means to avoid pregnancy[4].

However, gestation at this age can not be analyzed only by the scope of extrinsic factors, and the determinants inherent to the adolescent age should be considered. In some contexts, pregnancy is valued socially, often representing social status, which has attracted many adolescents in search of recognition or emancipation. In addition, the first menstruation is occurring earlier, but the psychic-social maturity is not following this cycle[12]. There is no room for reflections about the body, sexuality and affectivity, which may explain why many adolescents become pregnant, even having information about contraception[13].

Thus, the so called "age-related magical thinking" and impulsivity, allied to the influence of globalization, the media, lack of limits and changes in values inside the family and in society, corroborate the increased incidence of early pregnancies[14].

Adolescent pregnancy and childbirth are associated with adverse maternal and neonatal outcomes. About 3.9 million unsafe abortions among girls aged 15 to 19 occur each year, contributing to maternal mortality[15]. Infant motherhood also offers risks for newborns, such as low birth weight, premature delivery and hospitalization in a neonatal intensive care unit[16].

At this stage of development, pregnancy is a global health problem, with complications during pregnancy and childbirth, as well as being the second leading cause of female mortality in this age group[17]. Gestation among school-age adolescents is poorly addressed in scientific research, due to high rates of school dropout. Thus, studies on factors associated with pregnancy in the school environment are useful to highlight the profile of adolescents at risk. Based on the above, this study aims to analyze the prevalence and factors associated with gestation in Brazilian schoolchildren, by describing the socio-demographic characteristics related to the school, living habits of the target public and sexual behavior and testing associations among these characteristics.

Materials and Methods

A cross-sectional study was conducted using data from the National School Health Survey in Brazil (PeNSE, 2015). Information of public domain, was available through the Brazilian Institute of Geography and Statistics (IBGE).

The population was composed of female adolescents between the ages of 13 and 17, elementary and middle school students from public and private schools, located in the Brazilian capitals that participated in PeNSE 2015. Sample 2 of the microdata was used. Data collection was done accessing information from the PeNSE 2015 database, available in CSV format (Comma-Separated Values) at ftp://ftp.ibge.gov.br/pense/2015/microdados/.

The dependent variable studied was gestation. The independent variables were grouped into socio-demographic, school-related, lifestyle and sexual behavior. Socio-demographic variables included age, race/skin color, lives with mother/father, crowding, mother's schooling, and occupation. In relation to the school, the variables included level in which she studies, administrative dependence of the school (public/private) and school-shift. These variables were analyzed as related to life habits: regular physical activity, smoking experimentation, smoking in the last 30 days, experimentation of alcoholic beverage, alcoholic beverages in the last 30 days, drug experimentation, drugs in the last 30 days. The variables related to sexual behavior were: age at first sexual intercourse, condom use at first sexual intercourse, number of sexual partners, whether she received guidance: on pregnancy prevention, on sexually transmitted diseases, on how to get a free-condom , whether she has already been forced to have sex, knowledge concerning HPV vaccination campaign and whether she has received the HPV vaccine.

A descriptive analysis of the data was performed. The independent variables were categorized into dichotomous and an association with the dependent variable gestation was testedusing the chi-square test. The measure of association was the Prevalence Ratio (PR), with a 95% confidence interval (95% CI) and $p < 0.05$. The model of Multivariate Analysis using Poison Robust Regression was used, having as reference a Hierarchical Model, which was applied to adjust the independent effect of the exposure in the outcome of interest in variables with a value of $p < 0.20$. The variables entered into the multivariate model occurred according to the chronological order

of the events. The variables related to the adolescent were first included (Level 1). Variables related to the family context (Level 2), related to school (Level 3), lifestyle (Level 4) and sexual behavior (Level 5). At each level, the variables that, after adjustment, showed association with the outcome ($p < 0.05$) were maintained in the model at lower levels, adopting the same procedure for all hierarchical levels. The data were analyzed using the statistical package Statistical Package for the Social Sciences (SPSS), Version 18.0 [Computer program]. Chicago: SPSS Inc .; 2014.

The present study complies with the bioethical principles determined by Resolution 466/2012 of the National Health Council (CNS). The project was approved by the National Commission for Research Ethics (CONEP), under Opinion No. 1,006,467, dated March 30, 2015.

Results

The study included data from 11,850 adolescents. Concerning socio-demographic characteristics and, those related to school and life habits, there was ahigher prevalenceof adolescents with non-white skin color (61.2%), age above 15 years (60.4%), public school administration (55.3%), the daytime shift (89.4%), who did not live with the mother (12.8%), who did not live with the father (38.5%),), with a low level of maternal schooling (68.2%), who did not work (87.8%), who did not practice regular physical activity (9.9%). Smoke experimentation occurred in 23.7% and of these, 28.0% smoked in the last 30 days; experimentation of alcoholic beverages in 59.9%, among these, 47.9% had drunk in the last 30 days; 12.2%, of these (44.3%) used drugs in the last 30 days. Characteristics related to sexual behavior are described in Table 1.

Table 1. *Description of aspects related to sexual behavior, PeNSE, 2015*

Variables	n (%)
Sexual intercourse (n= 11804)	
Yes	4455 (37.,7)
No	7349 (62.3)
Age at first sexual intercourse (n= 4420)	
Upto 13 years	1563 (35.4)
Over 13 years	2857 (64.6)
Number of sexual partners (n= 4432)	
1 partner	1603 (36.2)
≥ 2 partners	2829 (63.8)
She received guidance on pregnancy prevention (n= 11009)	
Yes	8692 (79.0)
No	2317 (21.0)
She received guidance on STDs (n= 11252)	
Yes	9743 (86.6)
No	1509 (13.4)
She received guidance on how to get a free condon (n = 10994)	
Yes	7745 (70.4)
No	3249 (29.6)
Condom use at first sexual intercourse (n= 4440)	
Yes	2879 (64.8)
No	1561 (35.2)
Alreadypregnant (n= 1820)	
Yes	209 (11.5)
No	1611 (88.5)
She was already forced to have sex (n= 11764)	
Yes	569 (4.8)
No	11195 (95.2)
Know the HPV vaccination campaign (n= 11735)	
Yes	9982 (85.1)
No	1753 (14.9)
It was vaccinated against HPV (n= 5753)	
Yes	2826 (49.1)
No	2927 (50.9)

Source of data: PeNSE Database 2015

In relation to the sexual behavior of the population, 37.7% of the adolescents had already have sexual intercourse, in this group 35.4% were younger than 13 years and 11,5% reported having already become pregnant and 63,8% had 2 or more sexual partners. About 35% reported not using condom use during the first sexual intercourse. Less than 1/3 received no guidance on how to prevent pregnancy (29.6%), only 13,4% on how to prevent sexually transmitted diseases and, 29,6% on how to get a free condom About 5% reported sexual violence and 14,9% had no knowledge about the campaign against the HPV virus. Almost half of them were vaccinated against HPV (49.1%).

The association between socio-demographic characteristics, school-related characteristics, life habits and aspects of sexual behavior with gestation are described in Tables 2 and 3.

Table 2. *Association between socio-demographic profile, school-related and life habits with teenage pregnancy, PeNSE, 2015.*

Variable	Sample n	Pregnant n (%)	Crude PR (CI 95)	p-value	Adjusted PR	Adjusted p-value
Skin color						
White	1167	169 (14.5)	2.36 (1.69-3.29)	<0.001	2.3(1.69-3.38)	<0.001
Non-white	653	40 (6.1)	1		1	
Age						
Above 15 years	269	19 (7.1)	1.05 (1.02-1.10)	0.014	1.8(1.12-2.89)	0.014
Upto 14 years	1551	190 (12.3)	1		1	
Study shift						
Daytime	420	103 (24.5)	3.23 (2.52-4.15)	<0.001	2.0(1.46-2.76)	<0.001
Night	1400	106 (7.6)	1		1	
School Administration						
Public	1560	200 (12.8)	3.70 (1.92-7.12)	<0.001	1.5(0.75-3.34)	0.220
Private	260	9 (3.5)	1		1	
Lives with her mother						
Yes	1445	111 (7.7)	1	<0.001	1	<0.001
No	375	98 (26.1)	3.44 (2.70-4.34)		2.6(1.95-3.67)	
Lives with her father						
Yes	836	50 (7.0)	1	<0.001	1	0.022
No	975	150 (15.4)	2.20 (1.66-2.94)		1.4(1.05-2.11)	
Maternal education level						
Did not study/ Incomplete ES	569	119 (20.9)	3.25 (2.43-4.34)	<0.001	2.4(1.81-3.40)	<0.001
Full ES	964	62 (6.4)	1		1	
Drink in the last 30 days						
Yes	915	89 (9.7)	1	0.012	1	0.526
No	666	92 (13.8)	1.04 (1.00-1.08)		1.2(0.63-2.44)	
Drugs in the last 30 days						
Yes	197	19 (9.6)	1	0.257	1	0.391
No	244	32 (13.1)	1.04 (0.97-1.11)		1.3(0.68-2.62)	

Source of data: PeNSE Database 2015

ES= Elementary School

Among the socio-demographic characteristics, related to school, life habits and teenage pregnancy, there was statistically significant association between: white skin color (adjusted PR: 2.39, CI: 1.69-3.38, p <0.001), age above 15 years (adjusted PR: 1.80, CI: 1.12-2.89, p: 0.014), day shift (adjusted PR: 2.01, CI: 1.46-2.76, p <0.001), did not live with her mother (adjusted PR: 2.67, CI: 1.95-3.67, p <0.001), did not live with her father (adjusted PR: 1.49, CI: 1.05 (P = 0.022), low maternal schooling (adjusted PR: 2.48, CI: 1.81-3.40, p <0.001).

Table 3. *Association between sexual behavior and teenage pregnancy, PeNSE, 2015.*

Variable	Sample n	Pregnant n (%)	Crude PR (CI 95)	p-value	Adjusted PR	Adjusted p-value
Age of first sexual intercourse						
Upto13 years	390	55 (14.10)	1.30 (0.97-1.70)	0.072	1.67 (0.89-3.14)	0.110
Above13 years	1424	154 (10.80)	1		1	
Numberof sexual partners						
1 partner	880	65 (7.40)	1	<0.001	1	0.953
≥ 2 partners	937	144 (15.40)	1.09 (1.05-1.13)		1.02 (0.50-2.06)	
Condom use during first sexual intercourse						
Yes	1299	123 (9.,50)	1	<0.001	1	0.200
No	517	86 (16.60)	1.08 (1.04-1.13)		1.49 (0.80-2.77)	
Was forced to have sexual intercourse						
Yes	189	45 (23.80)	2.37 (1.77-3.19)	<0.001	2.13 (1.12-4.05)	0.020
No	1609	163 (10.00)	1		1	

Source of data: PeNSE Database 2015

A statistical association was also found between those reporting to have been forced to have sex and and teenage pregnancy (adjusted PR: 2.13; CI: 1.12-4.05; p: 0.020).

Discussion

Adolescent pregnancy is a global problem that occurs in high, middle and low income countries, driven, in some contexts, by poverty and lack of education and employment opportunities[6]. In the present study, about 11% of sexually active school-aged adolescents in Brazil, have already had a gestation. In Colombia, 17.4% of 15- to 19-year-olds were pregnant or were mothers by 2015[18]. In Cameroon, the prevalence of teenage pregnancy is 28%, of which 60.75% were unplanned[19]. In Brazil, an ecological study by Martinez et al., with adolescents aged 10 to 19 years, showed a rate of 17.5% of gestation, being higher in the North and part of the Northeast, regions with lower educational level, low per capita income and high social vulnerability[5]. Among the 4,634 young women interviewed by Almeida et al., pregnancy before the age of 20 years wasdeclared by 29.6% of adolescents[7].

The low prevalence evidenced in the present study, compared to the the national average, can be explained by the high school dropout rates among adolescent mothers. It is estimated that 5% to 33% of girls aged 15-24 who drop out of school do so because of early pregnancy or marriage[20]. A meta-analysis performed with data of 254,350 African adolescents identified that not attending school increased by 2.49 times the chance of becoming pregnant[8]. A similar finding was found in Johannesburg, where the school attendance showed to be a protective factor[9]. A study carried out in three Brazilian capitals found that 70.5% of the girls who reported at least one pregnancy did not complete elementary school, compared to 25.6% among those who did not become pregnant[7]. In addition, school dropout is related to the 3.5 times greater chance of recurrence of gestation in adolescence with social, economic and cultural development consequences[21].

Regarding skin color, it was observed that being white increased by 2.39 times the probability of an early pregnancy. A similar study, which evaluated pregnant women aged 13 to 19 years in prenatal care, showed a rate of 28.6% of unplanned pregnancies among white adolescents, 14.2% among women with brown and black skin color and 12% among the yelow ones[22]. In another descriptive study with 559 postpartum adolescent women, was reported a prevalence of 50.5% of white skin color[23]. On the other hand, in the United States, the pregnancy rate among black women aged 15 to 19 represents more than twice the rate among whites[24]. In Brazil, Cruz et al. have demonstrated that women who declare themselves as black and indigenous are more likely to have an early pregnancy[25]. Also in the study by Almeida et al., it was evidenced that among adolescents with greater school delay there was a higher proportion of gestation among black girls[7]. This was obtained trough ethnic-racial self-declaration in a country with high level of miscegenation. In addition, socioeconomic indicators can have unique effects among racial subgroups[25].

In relation to age, the current study observed that adolescents aged 15 years or older had a 1.8 times

higher chance of become pregnant. Similar results were found in the literature[21,22,26,2721]. In the United States, 18- to 19-year-old girls account for 69% of all adolescent pregnancy[24]. In South African regions, the mean age found was 15.9 years[26]. In Brazil, a study with 464 participants, found that the predominant age group in the first gestation was 16 to 17 years. In Latin America and the Caribbean, only 2% of women of childbearing age had their first pregnancy before 15 years of age, being the only region in the world where pregnancy at these ages had an upward trend[28]. Similarly, Cruz et al. showed that a prevalence of only 2.6% of pregnancies occurd below the age of 12 in the Midwest and 1.6% and 1.1% in the North and Northeast regions[25]. Adolescents older than 15 years pertain to the age group with higher rates of sexual activity[11] and more prolonged exposure to sexual risk behaviors that can lead to pregnancy, as well as access to low quality health services, making it difficult to develop educational actions aimed at preventing pregnancy[14].

Regarding the school shift, adolescents who attend school in the daytime have twice the chance of pregnancy compared to those who study at night. No studies were found in the literature that corroborate our results, which indicates the need for more research to investigate this factor.

When analyzing the family structure, the present study found that not living with the mother or the father increases the chance of pregnancy among adolescents by 2.67 and 1.49 times, respectively. Similarly, in Johannesburg, being raised by a single mother or by another person increased by 18.1 and 5.7 times the probability of pregnancy for women[9]. An African study of 820 adolescents showed that among the girls who never got pregnant, 50% of them had their parents living together, compared with 37% of the pregnant women[29]. Research in three Brazilian capitals showed a similar result, in which adolescents with separated parents were 3 times more likely to be pregnant, and these numbers were even higher when separation occurred during childhood[7]. On the other hand, Mota et al. identified that intra-family violence, was a risk factor for adolescent pregnancy[24]. Therefore unfavorable family context, lack of supervision and parental guidance may be associated with risk behavior and teenage pregnancy.

It was evidenced that adolescents whose mothers have low schooling are at risk about 2.48 times higher than having a gestation in adolescence. This finding is strengthened by Kassa et al., who found a 1.88 higher risk of pregnancy among daughters of mothers without schooling[8]. Analysis from the cohort "Birth to Twenty Plus" conducted in South Africa showed that girls with low maternal schooling had a 8.3 times higher chance of early age gestation[27]. The study by Martinez et al evaluated 645 municipalities in São Paulo and found that teenage pregnancy was more prevalent in those in which parents had up to 4 years of study[5]. In contrast, Almeida et al. found that, among adolescents with school delay, those whose mothers completed high school or higher education presented twice the chance of pregnancy with less than 20 years[7]. This information suggests that poor education of those responsible may lead to a worse socioeconomic situation, lack of information about sexuality and contraception and continuity of these pattern beyond motherhood[5].

According to United Nations Children's Fund, about 120 million children and adolescents under the age of 20 have experienced sexual violence worldwide[30]. In Brazil, the prevalence is 4.0%, being higher among students younger than 13 years and 16 years or over[31]. When analyzing the association between pregnancy and sexual abuse, adolescent victims of sexual violence presented a 2.13 times greater chance of getting pregnant. Similarly, a meta-analysis of 75,390 participants demonstrated a 1.48 times higher risk of gestation in adolescence who had suffer sexual abuse[10]. Donatus et al., in a cross-sectional study with 15- to 19-year-olds, showed that 33.11% of young women who were pregnant reported being forced by their partners to have sexual intercourse[19]. On the other hand, Mota et al., in a study carried out in a public school in Bahia, Brazil, found no association between the psychological, physical and sexual violence suffered by the schoolchildren analyzed and pregnancy[32]. One of the potential relationships between sexual abuse and pregnancy may be the early escape from dysfunctional families and higher exposure to the onset of sexual intercourse, use of drugs, delinquency and psychopathologies, impacting, therefore, the decision making process and consequently higher risk of unsafe sexual behavior[10].

Limitations

Given the cross-sectional nature of the study, whose exposure and outcome are collected in a single moment in time, it is not possible to establish the causal relationship between the associations found. The prevalence evidenced among school adolescents

does not represent the gestation rate in the age bracket because it counts only the adolescents who remain in the education system. The question posed by the questionnaire of the National School Health Survey, "you ever got pregnant" does not include information about the follow-up of the pregnancies or multi-parity of adolescents.

Conclusion

The National School Health Survey allow students to understand the sexual and reproductive health profile of this group. About 11% of sexually active students between the ages of 13 and 17 have already had a gestation, which reinforces the need for sexual and reproductive education programs as part of the school schedule . Social inequalities are important markers for sexual behavior of risk. White skin color, age above 15 years, day shift, not living with parents, low maternal schooling and sexual violence are strongly associated with gestation in adolescence. In addition to the negative effects on health and education indicators, disruptions can be expected inside the family and social environment of women who become pregnant before they reach adulthood. The school environment is conducive to implementing measures that take into account the socioeconomic and behavioral specificities of the population target, in order to promote the sexual and reproductive health of these girls.

References

[1] World Health Organization.*Adolescent health*. 2014. [Access 2018 Mar 21]. Available from: http://www.who.int/topics/adolescent_health/en/.

[2] Statute of the child and adolescent (Brazil). L*aw No. 8,069, of July 13, 1990. Provides for the Statute of the Child and Adolescent and provides other measures.* Brasília, DF: Portal oftheLegislation; OrdinaryLaws. 2014.

[3] Sawyer M, Afifi RA, Bearinger LH, Blakemore SJ, Dick B, Ezeh AC, Patton GC. Adolescence: a foundationforfuturehealth.*Lancet.*2012:379:1630-40. DOI:10.1016/S0140- 6736(12)60072-5

[4] World Health Organization.*WHO guidelines on preventing early pregnancy and poor reproductive outcome among adolescents in developing countries*. Geneva: World Health Organization; 2011.

[5] Martinez EZ, Roza DL.*Ecological analysis of adolescent birth rates in Brazil: Association with Human Development Index*. Women Birth: Australian College of Midwives; 2019 https://doi.org/10.1016/j.wombi.2019.04.002

[6] United Nations Population Fund.*Distant worlds. Reproductive health and rights in an era of inequalities.* Brazil: UNFPA; 2017.

[7] Almeida MCC, Aquino EML. Adolescent pregnancy and completion of basic education: a study of young people in three state capital cities in Brazil. *Cad. Saúde Pública*. 2011; 27(12):2386-400.

[8] Kassa GM, Arowojolu AO, Odukogbe AA, Yalew AW.Prevalence and determinants of adolescent pregnancy in Africa: a systematic review and Meta-analysis. *Reproductive Health*. 2018; 15:195.

[9] Brahmbhatt H, Kågesten A, Emerson M, Decker MR, Olumide AO, Ojengbede O, et al. Prevalence and determinants of adolescent pregnancy in urban disadvantaged settings across five cities. *J Adolesc Health*. 2014;55(6 Suppl): 48–57.

[10] Madigan S, Wade M, Tarabulsy G, et al. Association between abuse history and adolescent pregnancy: A meta-analysis. *J Adolesc Health*. 2014; 55:151-9.

[11] Gonçalves H, Machado EC, Soares ALG, Camargo-Figuera FA, Seering LM, Mesenburg MA, et al. Sexual initiation among adolescents (10 to 14 years old) and health behaviors. *Rev. Bras. Epidemiol*. 2015; 18: 25-41.

[12] Institute of Childhood.*Early Childhood and Pregnancy in Adolescence.* Fortaleza, CE: IFAN; 2014.

[13] Dias ACG, Teixeira MAP. Teenage pregnancy: a look at a complex phenomenon. *Paidea.*2010; 45: 123-31.

[14] Ribeiro PM, Gualda DMR. Adolescence Pregnancy: The Construction of the Health-Resilience Process. *Esc Anna Nery*. 2011;15(2):361-71.

[15] Darroch J, Woog V, Bankole A, Ashford LS. *Adding it up: Costs and benefits of meeting the contraceptive needs of adolescents*. New York: GuttmacherInstitute; 2016.

[16] Kawakita T, Wilson K, Grantz KL, Landy HJ, Huang C, Lobo VG.Adverse maternal and neonatal outcomes in adolescent pregnancy. *J PediatrAdolescGynecol*. 2016; 29(2): 130-6.

[17] McCarthy FP, O'Brien U, Kenny LC. The management of teenage pregnancy. *BMJ*. 2014; 349: 3-6. doi: https://doi.org/10.1136/bmj.g5887

[18] National Demographic and Health Survey (Colombia) 2015: Executive summary. Bogotá; 2017.

[19] Donatus L, Sama DJ, Tsoka-Gwegweni JM, Cumber SN. Factors associated with adolescent school girl's pregnancy in Kumbo East Health District North West region Cameroon. *Pan Afr Med*. 2018, 31:138. doi: 10.11604 / pamj.2018 .31.138.16888

[20] Wodon QT, Male C, Nayihouba KA, Onagoruwa AO, Savadogo A, Yedan A, et al. *Economic impacts of child marriage: global synthesis report (English). Economic Impacts of Child Marriage.* Washington, DC: World Bank Group; 2017.

[21] Moura LNB, Gomes KRO, Sousa CRO, Maranhão TA. Multiparity between adolescents and young people and risk factors in Teresina / Piauí. *Adolesc. Cheers.* 2014; 11 (3): 51-62.

[22] Araújo AKL, Nery IS. Knowledge about contraception and factors associated with pregnancy planning in adolescence. *CogitareEnferm.* 2018, 23 (2): e55841. DOI: http://dx.doi.org/10.5380/ce.v23i2.55841

[23] Fernandes RFM, Meincke SMK, Thumé E, Soares MC, Collet N, Carraro TE. Prenatal characteristics of adolescents in capitals of the southern and northeastern regions of Brazil. *TextContextEnferm.* 2015; 24 (1): 80-6.

[24] Henshaw KKS. U.S. *Teenage pregnancies, births and abortions, 2010: National and state trends by age, race and ethnicity*. New York: Guttmacher Institute; 2014.

[25] Cruz MS, Carvalho FJV, Irffi G. Socioeconomic, demographic, cultural, regional and behavioral profile of teenage pregnancy in Brazil. *RevPlanPol Publicas.* 2016; 46: 243-66.

[26] Lundeen EA, Norris SA, Martorell R, Suchdev PS, Mehta NK, Richter LM, Stein AD. Adolescent Pregnancy and Attained Heightamong Black South African Girls: Matched-Pair Prospective Study. *PLoSOne.* 2016; 11(1).

[27] Yilmaz E, Yilmaz Z, Cakmak B, Karsli MF, Gultekin IB, GuneriDogan N, Kara OF, Kucukozkan T. Nausea and Vomiting in Early Pregnancy of Adolescents: Relationship with Depressive Symptoms. *J PediatrAdolescGynecol.* 2016; 29(1):65-8.

[28] United Nations Population Fund (UNFPA). *World Population Situation 2013*. Maternity in childhood: meeting the challenge of teenage pregnancy. New York: UNFPA; 2013.

[29] Ahorlu CK, Pfeiffer C, Obrist B. Socio-cultural and economic factors influencing adolescents' resilience against the threat of teenage pregnancy: a cross-sectional survey in Accra, Ghana. *Reprod Health*. 2015; 12:117.

[30] United Nations Children's Fund.*A statistical analysis of violence against children*. New York: UNICEF; 2014.

[31] Santos MJ, Mascarenhas MDM, Malta DC, Lima CM, Silva MMA. Prevalence of sexual violence and associated factors among primary school students.*CienSaude Colet*. 2019; 24(2):535-44.

[32] Mota RS, Gomes NP, Estrela FM, Silva MA, Santana JD, Campos LM. Prevalence and factors associated with the experience of intrafamily violence by school adolescents. *RevBrasEnferm.* 2018; 71 (3): 1086-91.

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