DOI: 10.1590/1413-81232017229.13312017

Rape and pregnancy of girls aged up to 13 years in Brazil: characteristics and implications in health during gestation, delivery and childbirth

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Abstract *Sexual violence against children and adolescents is a serious threat to the rights and full health of this age group. This study aims to describe the characteristics of mothers aged up to 13, and analyze the profile of cases of notified rape in this age range and repercussions of this violence during pregnancy and childbirth. It is a comparative study of the characteristics of gestation and childbirth of girls aged up to 13 who have had children, without or with notification of rape, in the Violence & Accidents Vigilance (VIVA) System of the Brazilian Case Registry Database* (Sistema de Informação de Agravos de Notificação – SINAN). *A significant percentage (67.5%) of the girls aged up to 13 with children were of the black race/color category. There was repeated violence in 58.2% of cases. The notified rape victims have a higher percentage of birth by cesarean section, late onset and a lower number of prenatal consultations; and their babies had lower birthweight and lower 1-minute Apgar scores than mothers without rape notification. Rape of children and adolescents is an important risk factor that has repercussions during pregnancy, and complications in delivery and childbirth.*

Key words *Rape, Children's health, Adolescents' health, Teenage pregnancy, Sexual violence*

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Introduction

Violence against children and adolescents is a grave threat to the human rights and the health of this age group[1-3]. Females are more susceptible to situations of sexual violence, due to the inequalities in gender relationships and society's patriarchal values[4], which have individual and social consequences[4-6].

The Brazilian Penal Code[7,8] treats sexual relations with people aged less than 14 as a sexual crime against vulnerable people, independently of proof of whether or not consent of the victim is discerned, and of any other circumstances[8].

In cases of rape of children or adolescents, a crime against sexual dignity and liberty[9] which includes sexual intercourse[10] or other acts of libido, the consequences are even more serious, able to result in undesired pregnancy, sexually transmitted diseases, injuries to sexual organs, and damage to mental health, potentially generating long-term and/or inter-generational effects[4,5,9,11].

In a study in Latin America, between 7% and 36% of women reported having suffered some type of sexual abuse in infancy[4]. In Brazil, the data of the Brazilian Public Safety Annual reported 45,460 cases of rape in 2015, including rapes of women and of men[12]. However it is known that on average 89% of the victims are female[12] and that there is a very high level of under-registration with the Police. It is estimated that every year there are 527,000 cases of attempted rape or rape in Brazil, of which only 10% are reported to the police[9]. In 2015, the Viva/Sinan survey reported 162,575 cases of violence against women, of which total 17,871 (10.99%) were notifications of rape, and of these 6,706 (37.52%) were in girls between the age of 0 and 12[13].

The objective of this study was to describe the characteristics of mothers aged up to 13, to analyze the profile of those that were notified for rape in this age range, and the repercussions of this violence during pregnancy and childbirth. The hypothesis is that as well as the effects inherent to precocious pregnancy, rape becomes an important additional risk factor in pregnancy, delivery and birth. The study aims to provide inputs for integrated policies and actions to deal with the problem, with occupational health playing an important role in the care of children and adolescents that are victims of this violence, and also in articulation of the inter-sectorial network.

Method

This is a comparative study of the characteristics of pregnancy and childbirth of girls aged up to 13 who have had children, with or without notification of rape in the survey by the Viva-Sinan (Violence & Accidents Vigilance (VIVA) System of the Brazilian Case Registry Database (*Sistema de Informação de Agravos de Notificação* – SINAN). The age range was chosen due to the legal cut-off level in the definition of rape, which is the age of 14.

Firstly, characteristics of all the girls aged up to 13 who have had children (total) were described. This was done using data from the Live Births Declaration Registry (DN) of the Live Births Information System (SINASC). The variables described were: region of residence (North, Northeast, Southeast, South, Center-West); year of birth (2011 to 2015); mother's age (8 to 13 years); race or color ('black [comprising black and mixed-race]; white; indigenous; and *unknown* ['yellow' (n = 51) were included in *unknown*, because the number is very small]; marital status (married, single, stable union, and *unknown* [widows (n = 7) and those with status *separated* (n = 16) were included in *unknown* due to the small number].

A linkage was established between the databases of SINASC and SINAN, for the category of girls aged up to 13 with children (SINASC) and girls aged up to 13 with notification of rape (SINAN). The cases were correlated using a Bloom filter[14]. The following variables were used for pairing between the databases: name of patient in the SINAN and name of mother in the SINASC, date of birth of the patient in the SINAN and date of birth of the mother in the SINASC and municipality of residence in the two systems. The pairs with maximum score (10,000) were considered to be true pairs. All the pairs with score below 10,000 were then analyzed considering the name of the patient and the date of birth (when one of the databases did not have the information on birth date, validation was made using the age of the victim). After the process of validation of pairs, a total of 1,273 cases were obtained.

The period of analysis was from 2011 to 2015. Ministerial Order GM104 issued by the Health Ministry on January 25, 2011[15] "defines the terminologies adopted in Brazilian legislation according to the International Health Regulations 2005 (IHR 2005) criteria, the list of illnesses, adverse effects, and events in public health sub-

ject to compulsory notification throughout the whole of Brazil and establishes flow, criteria, responsibilities and duties of health professionals and services, and added notification for "domestic violence, sexual and/or other forms of violence" to the Compulsory Notification List (*Lista de Notificação Compulsória* – LNC) and ordered that related adverse events must be notified and registered in the SINAN, through an Individual Notification Form[16]. 2015 is the last year with consolidated information. Duplications of notifications of violence were excluded before the two databases were related.

For the cases identified in the linkage, a description of the violence was carried out through the following variables: probable perpetrator of the rape (boyfriend/ex-boyfriend, friend/acquaintance, father/stepfather, spouse/former spouse, unknown, others [includes carer, work boss, institutional relationship, police or law officer, mother/stepmother]); place of occurrence (home, streets, school, collective housing/sport location, other [includes bar or similar, retail/services, industry/construction]); repetition of violence (yes, no); procedure carried out (STD prophylactic, HIV prophylactic, hepatitis B prophylactic, emergency contraception, no procedure).

Finally, the comparison was made between characteristics of pregnancy and childbirth of children of girls aged up to 13 with and without notification of rape. The variables compared were: age; race/color; marital status (as per categorization described above); prenatal consultations (none, 1 to 5 and 6 or more); 3-month period of first prenatal consultation (first, second, third or unknown); type of birth (natural or caesarean); weeks of pregnancy (premature – up to 37 weeks; term – 37-41 weeks; and late – 42weeks or more); birth weight (less than or more than 2.500 kg); Apgar score in first and fifth minutes (0-3, 4-7, 8-10 and unknown); and place of birth (hospital, home, other health establishment, others, or unknown). The two groups were compared using a chi-square test for independence to check whether there was a statistically significant difference between the proportions. For the test, the *unknown* categories were excluded.

Results

According to the SINASC, in the years 2011-2015 a total of 31,611 girls up to the age of 13 had children – this group was predominantly of the negro race (67.5%). The largest proportion of births was in the Northeastern region (39.4%), nearly twice the percentage in the Southeastern region (23.2%), which is more highly populated. Although the greater part (76.1%) of these girls were single, a fact that called attention was that 19.6% of them were reported as being in a stable relationship (Table 1).

From integration of the SINAN and SINASC data, it was possible to identify that the greater part of the notified cases of sexual violence (n = 1,273) were probably committed by the boyfriend, ex-boyfriend, spouse or ex-spouse (51.6%), followed by the category *friend/acquaintance* (17.6%) and *father/stepfather* (13.0%). The most frequent location was the home (69.3%), which shows a direct relationship with the person committing the crime, that is to say people who are close to or within the family circle. Repetition of violence took place in 58.2% of the cases (Table 2).

As to procedures carried out in the health services to prevent unwanted pregnancy and sexually transmissible diseases (STDs), it was found that only 6.4% of the victims carried out any prophylactic for STDs, 7.1% for HIV, 4.8% for hepatitis B, and 1.3% emergency contraception (Table 2).

Comparing the proportions of the data relating to characteristics of the pregnancy, birth and baby children of girls up to age 13 with and without notification of rape, there was a statistically significant difference in all the variables, with the exception of fifth-minute Apgar ($p = 0.557$) and type of birth ($p = 0.463$) (Tables 3 and 4).

In the group of cases with notification of rape, among girls up to the age of 12, there was a higher proportion with notification of rape – 29.9% compared to 14.7% for the whole group up to age 13. In both groups black and single mothers were the majority, and a higher proportion in the group with notified rape: 77.2% and 86.2% respectively, compared to 75.8% and 77.6% (Table 3).

Mothers with notification for rape had the highest percentage of premature children (birth at 37 weeks or less): 26.4%, compared to 20.8% among mothers without the notification; and also began prenatal care later, with 48.6% having their first consultation in the first three months of pregnancy, compared to 56.8% for the non-notified group. In the group with notification of rape, the percentage of girls making the recommended number of consultations (6 or more) was lower (51.7%), than in the non-notified group (56.5% (Table 3).

Table 1. Girls aged up to 13 with children, registered in the SINASC, 2011-2015.

Characteristics	n (31,611)	%
Region of residence		
North	6,657	21.1
Northeast	12,444	39.4
Southeast	7,323	23.2
South	2,632	8.3
Center-West	2,555	8.1
Year		
2011	6,797	21.5
2012	6,671	21.1
2013	6,491	20.5
2014	5,832	18.5
2015	5,820	18.4
Age		
8	5	0.0
9	7	0.0
10	78	0.2
11	555	1.8
12	4,135	13.1
13	26,831	84.9
Race/color*		
Dark (black and mixed-race)	21,345	67.5
White	5,394	17.1
Indigenous	1,388	4.4
Marital status**		
Single	24,069	76.1
Stable union	6,199	19.6
Married	617	2.0

Source: Sinasc (Health Ministry).
* Race/color unknown + 'yellow': 3,484 (11%).
** Marital status unknown + widows + separated: 726 (2.3%).

Table 2. Rapes of girls aged up to 13, notified in SINAN, who had children according to records in the SINASC, 2011-15: probable perpetrators, and types of event.

Characteristics	n	%
Probable perpetrator of the rape	**n = 1273**	
Boyfriend/ex-boyfriend	523	41.1
Friend/acquaintance	224	17.6
Father/stepfather	166	13.0
Spouse/ex-spouse	134	10.5
Unknown	55	4.3
Others*	171	13.4
Location of the rape	**n = 1259**	
Residence	872	69.3
Public right of way	32	2.5
School/collective habitation/ sport practice location	22	1.7
Others **	81	6.4
Unknown	252	20.0
Repetition violence	**n = 1273**	
Yes	741	58.2
No	224	17.6
Not known	308	24.2
Procedure carried out	**n = 1273**	
STD prophylactic	82	6.4
HIV prophylactic	90	7.1
Hepatitis B prophylactic	61	4.8
Emergency contraception	16	1.3
No procedure	1024	80.4

Source: Sinasc/Sinan/Health Ministry.
* *Others* includes carer, boss/employer, institutional relationship, police/law agent, mother/stepmother… ** *Others* includes bar or similar, retail/service establishment, industry/ construction…

As to characteristics of the birth and the newborn child, there was a higher percentage of cesarean section in notified rape victims (42.3%) than in those without rape notification (41.2%). Underweight babies were also more frequent in mothers that had been victims of notified rape, at 19.5%, compared to 14.5% for the group without this notification (Table 4).

The score on the Apgar test – of the baby's general health at birth, taken in both the first and the fifth minute of life – showed a higher percentage (3.6%) with low score (0.3%) in the 1-minute Apgar test, compared to 2.4% for the non-notified group; for the 5-minute test, the respective percentages were 1.1% and 0.8%, but this result is not statistically significant (Table 4).

The percentage of mothers up to age 13 with birth in a hospital was higher (99.1%) for those with notification of rape, than for those without (97.4%). The percentage giving birth at home was significantly higher, at 1.8%, for those without notified cases of rape – vs. 0.5% for those with such cases.

Discussion

The study indicates a high number of girls aged up to 13 with children. These child-mothers that were cases with notification of rape had a higher percentage of birth by cesarean section, later start of prenatal consultations, and a lower number of them; their babies had lower weight at birth; and their Apgar first-minute scores were weaker than those of the mothers without the rape notification. Rape of a child or adolescent is an important risk factor which has repercussions on gestation, complications in delivery and birth.

Table 3. Comparison of mothers and pregnancies in girls aged up to 13 with notification of rape, 2011-2015.

Characteristics	Without notification of rape		With notification of rape		Total		p-value*
	n	%	n	%	n	%	
Mother's age							0.000
8 to 11	593	2.0	52	4.1	645	2.0	
12	3,858	12.7	277	21.8	4,135	13.1	
13	25,887	85.3	944	74.2	26,831	84.9	
Total	30,338	100.0	1,273	100.0	31,611	100.0	
Mother's race/color							0.016
White	5,194	19.3	200	16.7	5394	19.2	
Indigenous	1,314	4.9	74	6.2	1388	4.9	
Dark (black + mixed-race)	20,419	75.8	926	77.2	21345	75.9	
Total	26,927	100.0	1,200	100.0	28127	100.0	
Mother's marital status							0.000
Single	22,982	77.6	1,087	86.2	24,069	77.9	
Married or Stable union	6,642	22.4	174	13.8	6,816	22.1	
Total	29,624	100.0	1,261	100.0	30,885	100.0	
Weeks' gestation							0.000
Less than 37 weeks (premature)	5,442	20.8	315	26.4	5,757	21.1	
37-41 weeks (term)	19,477	74.5	841	70.4	20,318	74.3	
42 plus weeks (late)	1,232	4.7	39	3.2	1,271	4.6	
Total	26,151	100.0	1,195	100.0	27,346	100.0	
1st prenatal consultation – in which 3-month period?							0.000
1st	13,980	56.8	534	48.6	14,514	56.4	
2nd	9,113	37.0	494	45.0	9,607	37.4	
3rd	1,530	6.2	70	6.4	1,600	6.2	
Total	24,623	100.0	1,098	100.0	25,721	100.0	
Number of prenatal consultations							0.004
None	332	1.2	14	1.2	346	1.2	
1-5	11,297	42.3	572	47.1	11,869	42.5	
6 or more	15,101	56.5	628	51.7	15,729	56.3	
Total	26,730	100.0	1,214	100.0	27,944	100.0	

Sources: SINAN, SINASC.

* Chi-Squared test of independence.

In spite of the law's rigor in characterizing all pregnancies in the universe of girls considered in this study as rape, other questions such as precocious sexual initiation, and consent, need to be considered for public health policies to be better designed. In this context, it is believed that the majority of the girls with notification of rape were victims of a forced sexual relationship, which would generate more repercussions for the physical and mental health of them as mothers, with consequences in health during the pregnancy and delivery. It is also possible that the cases that reached the health services are those that were more serious. If this were not so, from the point of view of healthcare, if we were to treat all the cases in the same way, that is to say, all girl-mothers as rape victims, one would expect better results for the cases that are notified, due to the possibility of greater access to the health and protection system. Thus, in the universe of child-mothers, the data revealed that those who suffered sexual violence, as captured through notification, are more vulnerable than those which did not notify the rape.

The higher concentration in the Northeast of births from mothers aged up to 13 points to issues related to socioeconomic conditions and historically known social inequalities, which contribute to the greater vulnerability of these girls. Data of the PeNSE 2012 survey, a popula-

Table 4. Pregnant girls aged up to 13 with and without notification of rape – characteristics of birth and babies, 2011-2015.

Characteristics	Without notification of rape		With notification of rape		Total		
	n	%	n	%	n	%	p-value*
Type of birth							0.463
Normal	17,782	58.8	734	57.7	18,516	58.7	
Cesarean	12,468	41.2	537	42.3	13,005	41.3	
Total	30,250	100.0	1,271	100.0	31,521	100.0	
Birth weight							0.000
Under 2500g	4,391	14.5	248	19.5	4,639	14.7	
2500g and over	25,896	85.5	1,025	80.5	26,921	85.3	
Total	30,287	100.0	1,273	100.0	31,560	100.0	
1-minute Apgar test							0.024
0-3	679	2.4	44	3.6	723	2.4	
4-7	4,723	16.4	195	15.8	4,918	16.4	
8-10	23,392	81.2	996	80.6	24,388	81.2	
Total	28,794	100.0	1,235	100.0	30,029	100.0	
5-minute Apgar test							0.557
0-3	227	0.8	13	1.1	240	0.8	
4-7	1,059	3.7	48	3.9	1,107	3.7	
8-10	27,482	95.5	1,176	95.0	28,658	95.5	
Total	28,768	100.0	1,237	100.0	30,005	100.0	
Birth location							0.000
Hospital	29,399	97.4	1,259	99.1	30,658	97.4	
Other health establishments	255	0.8	5	0.4	260	0.8	
Home	544	1.8	6	0.5	550	1.8	
Total	30,198	100.0	1,270	100.0	31,468	100.0	

Source: SINAN/SINASC.

* Chi-Squared test of independence.

tion survey of 110,109 students in the 9th grade of daytime basic education at public and private schools in Brazil, indicates that school children whose mothers have less schooling and work in jobs have a higher chance of sexual relationship[17]. The level of schooling is usually adopted in the literature as a proxy for socioeconomic conditions.

Analysis by race/color also underlined the condition of social inequality, in that black children and adolescents were more susceptible to sexual violence.

As is to be expected from the young age, the majority of the girls who had children were single. However, the noticeable proportion having a stable union or marriage can be explained, in part, by the attempt to rise socially, and to seek independence from the family circle, substituting the links with parents for the links of dependency, in terms of affection and finance, of the couple[18], although in many cases this expectation is not reciprocated.

In Brazil, the legal age for marriage is 18, but under the Civil Code teenagers can marry before the age of 16 without the parents' consent if there is pregnancy[19]. Among the countries of Latin America and the Caribbean, Brazil stands out for the high number (in absolute terms) of marriage in childhood and adolescence[19]. Although SINASC records the high prevalence of girls up to the age of 13 married or with a stable union in the period 2011-15, it is not possible to determine the age of the partners, and it is estimated that there is a major sub-notification of this item of data, since marriages in childhood, in Brazil, are predominantly informal in nature[19].

Childhood marriage, defined by the United Nations Convention on the Rights of the Child (UNCRC) as a stable union involving at least one spouse aged under 18[19], is a violation of human

rights, and in the majority of cases is a damaging practice[3,19]. A study carried out in the urban areas of Belém and São Luis[19] highlighted the principal consequences of marriage in childhood and adolescence: pregnancy and problems related to maternal and child health; educational delays and challenges; a limitation on girls' mobility and social networks; and exposure to violence from the intimate partner[19]. Thus, pregnancy in this age range represents a risk factor and a destructuring element in the life of these girls[20].

Rape is one of the most perverse of crimes, since it affects the victims' body, mind and dignity. The suffering that is generated can lead to depression or other mental disorders, and can even result in attempted suicide[21], as well as other serious impacts on the victims' health and quality of life, such as a higher risk of deterioration of physical health, principally of sexual and gynecological health[6]. Other factors described as consequences of this violence include: lower use of contraceptive methods, a higher possibility of precocious pregnancy; and a higher risk of repetition of the aggression[1,6].

Our comparative analysis based on integration of the data for notification of rape (SINAN) and births of children (SINASC) from mothers up to age 13, over the period 2011-15, evidence a percentage of notified rapes of 4%, comprising a total of 1,273 cases in this period. It is estimated that there is sub-notification of cases, having in mind that the process of implementation of the VIVA did not take place homogeneously, throughout the whole of Brazil, since some municipalities are more sensitive to this vigilance. This result points to a phenomenon that is complex, and often difficult to characterize.

If on the one hand, under the Brazilian Penal Code[7,8] sexual relations with children under the age of 14 are treated as a sexual crime against a vulnerable person, independently of proof of discernment or not for consent of the victim, or of any other circumstances[8], at the same time, when it is a case of relationship with intimate partners, other characteristics including the question of consent, the start of sexual activity and the age of the possible perpetrator, for example, need to be taken into consideration case by case, within the context, for the most faithful identification of this violence, with a view to setting out more specific strategies that are appropriate for dealing with it.

A limitation of this study is considered to be the sub-notification of cases of sexual violence, and at the same time, the occurrence of notification of rape only due to the legal issue, even when the sexual relationship was by consent. This is because, in some cases, pregnancy can represent a choice within the scope of the person's family repertoire and social context[1]; and in others, one cannot omit to mention the fact that the precocious start of sexual activity is not always a conscious decision, in which the risks and consequences are evaluated, nor one that is free of doubts[22].

Precocious start of sexual activity is a reality in Brazil and is similar to the profile of Latin America, in which recent decades have shown a significant increase in this profile[23]. In Brazil, data of the PeNSE 2012 indicated that 13.7% of people under 13 have already had sex at least once, and 9.6% were children younger than 12 – of the total of 107,468 pupils participating in the survey of pupils in 9th-grade basic education[17,24].

Thus, it is found that public policies face difficulties in guaranteeing the sexual and reproductive rights to these adolescents and their partners, whether because of the cultural conservatism that negates the practice of sex in the early years of adolescence, or due to the lack of effectiveness of the health, education and social support services[25].

As well as the analysis of the aggressors a highlight is that an important part of the sexual violence against children and adolescents is committed by the father, stepfather, or a friend or acquaintance – a total of 30.6% of the cases. These results are similar to the various studies[6,9,26-28] and reveal the relational and intimate character[5] of this type of violence. A survey in Curitiba indicated that in the group of children up to age 12 that had suffered sexual aggression, 83.6% of the aggressors were fathers, stepfathers, close relatives, friends or acquaintances[29]. A study by Ipea, with data for notification of violence in 2011, revealed that 56.3% of the aggressors of the children were fathers, stepfathers, friends or acquaintances of the victim[9]. It also highlighted that, in general, 70% of rapes are committed by relatives, boyfriends or friends/acquaintances of the victims, and in these cases the home is the principal location 79% where the rape took place[9].

Violence of repetition, in 58.2% of the cases, reveals the chronic and perverse character and tends to become progressively more serious[30]. Violence when not interrupted can generate illness, death or physical or emotional consequences that will accompany the victim over the whole of her life. Non-lethal consequences of repetition of violence against women that generate illness in-

clude chronic problems such as headaches, stomach pain, vaginal infections, sleep disturbances and eating disorders; and illnesses with delayed effect, including arthritis, high blood pressure and heart disease[30]. A case study in the Dr. Manuela Gea González General Hospital in México of adolescents up to age 18 indicated that 49% reported repeated abuse, between two and more than ten times[28]. Another study in the Center for Reproductive Health & Integral Development of Adolescents at the University of Chile, with young people up to age 19, reported that in 39% of the case the aggression was reiterated[6]. Thus, the violence of repetition in women with notified rape shows the fragility of the network in providing healthcare and protection with the objective of interrupting the cycle of violence and saving lives.

The difference in figures between mothers aged up to 13 in the notified and non-notified groups shows that this type of sexual violence reproduces a situation of vulnerability and risk for the mother and the newborn, principally among children and adolescents who are black. Child mothers with rape notification had worse performance, in terms of early start of prenatal care (first three months) and higher percentages of caesarean section and hospital birth. Similarly, children of mothers with rape notification were born with a higher percentage of low weight and weaker results in the 1-minute Apgar test.

Pregnancy in young people under the age of 15 can mean various complications for the child, including: higher frequency of premature birth, lower birthweight, lower Apgar scores, respiratory conditions, obstetric trauma, more perinatal illness, and child mortality[25].

In the case of pregnancy arising from rape, the situation of vulnerability of the child or adolescent is worse, in that it represents an unwanted event and one that is the product of an occurrence of violence[6]. Thus, the indices of the various health problems of early pregnancy are increased, with the addition of the lower chance of adequate prenatal care, depression and contracting sexually transmitted infections, including HIV[1,3,31,32]. Women's health is more fragile in cases where violence occurs while they are pregnant, and can result in various traumas, which can have consequences for the fetus and of the child[1,31,32].

Also, these women have to make difficult decisions, such as whether to continue or terminate the pregnancy[6]. In a study in the city of Cali, Colombia[6], of women who continued with gestation arising from rape, it was observed that for most of them it was not a conscious or personal decision, and arose from absence of access to abortion, failings in the methods employed, external pressures, or even lack of knowledge about their condition[6].

A study at the Center for Reproductive Health & Integral Development of Adolescents at the University of Chile accompanied 48 adolescents who became pregnant after sexual violence and compared the results of adolescents that were pregnant as outcome of a relationship. In the study group there was found to be a negative attitude in relation to the pregnancy, with feelings of frustration and blame persisting, and also a greater tendency for the adolescent to become ill during the pregnancy, at birth and puerperium, with a higher frequency of scores under 7 in the fifth-minute Apgar test[6].

A survey of data on a cohort of mothers and children by the Public Health Institute of Norway indicated that the preference for cesarean birth was higher among women who suffered violence in infancy, as also was the prevalence of pre-eclampsia, with a statistically significant difference from the group of women not exposed to violence in infancy[33]. The proportion of women with natural spontaneous childbirth was equivalent for both groups[33].

Article 128 of the Brazilian Penal Code allows abortion in two exceptional circumstances: if there is no other means of saving the life of the mother, or in cases of pregnancy arising from rape, with the consent of the mother or her legal representative[34]. Brazil's public Single Health System (SUS) offers the service of legal abortion – the legal understanding is that the mother has a right to do it in the case of rape, independently of authorization by a Court or any proceedings against the perpetrator of the crime[8], though in practice this right is not always guaranteed.

Thus it is concluded that pregnancy in infancy and adolescence is a controversial subject in the debate on sexual and reproductive health[20]. One has to weigh aspects such as the girl's age, the start of sexual activity, consent, and the age of the child's father, for a more reliable characterization of violence and for proposal of public policies to confront the problem. And for this, among other things, more qualification of the information in the SINASC is needed, with more variables filled in about the mother, the pregnancy, and principally, the age of the child's father. It also becomes necessary to qualify the information on 'location of the event' and 'repeated violence' in the SINAN, due to the high number of

cases in the 'unknown' category, which indicates a limitation of this study.

Repetitive violence, pregnancy resulting from rape and the low occurrence of minimal procedures such as offer of prophylactics for STDs, emergency contraception, and legal abortion (provided for by Article 128 of the Brazilian Penal Code), show that the healthcare networks are failing. In spite of the institutionalization of these services[35], in practice the results suggest that this supply does not happen in a satisfactory and appropriate way.

The violence inflicted on children and adolescents is recognized to be one of the principal threats to health, human rights and public safety in Brazil and the Americas[26]. Thus, promotion of health and of a culture of peace should result from a combination of public policies that provide a social structure for individual development of the child and adolescent and their families[26].

Basic Healthcare is a privileged space for protection of the program because, in theory, it has a large-scale coverage and contact with women, being able to recognize and shelter cases of violence against children and adolescents at the earliest point possible[35,36]. A major challenge of the health sector is to overcome fragmentation and guarantee integral care, and information necessary for the decision on whether or not the pregnancy should be continued, and also referral access to the service that carries out legal opportunity, at the appropriate time.

The inter-sectorial network should be sensitive to the cases of violence against children and adolescents, and also attend to the specificities of adolescents in the field of sexual health and reproductive health, taking into account the inequalities of gender, race/color, sexual orientation and social class, and involving adolescents and young people of the male sex[20].

Collaborations

RMCV Souto participated in the conception and scope of the study, the article write-up and approval of the final version for publication. DL Porto participated in the design and data analysis. IV Pinto participated substantially in the article write0up, analysis and approval of the final version of the article. CCF Vidotti participated in the analysis and revision. LA Barufaldi participated in the design, analysis and interpretation of data, critical revision of the article and approval of the final version for publication. MG Freitas participated in the critical revision of the article and approval of the final version for publication. MMA Silva and CM Lima participated in the revision.

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Article submitted 10/12/2016
Approved 18/04/2017
Final version submitted 30/05/2017