

Vulnerability of pregnancy recurrence among adolescents*Vulnerabilidad de la recurrencia del embarazo entre adolescentes**Vulnerabilidade da recorrência de gestação entre adolescentes***Ana Carolina Bhering Alves do Amaral^{1*}**

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¹Universidade Federal de São Paulo. São Paulo, Brazil.*Corresponding author: E-mail: acarolina.bhering@gmail.com**Abstract**

The aim was to identify aspects of vulnerability in the face of repeat pregnancies in adolescents according to sociodemographic, gynecological, obstetric, and contraceptive variables, and to determine whether or not these pregnancies were planned. This is a descriptive, cross-sectional study with a quantitative approach with 323 postpartum adolescents hospitalized in a rooming-in unit of a maternity hospital located in the Center-South region of the city of São Paulo for 12 months. Using the Two Step Cluster method, two groups were identified by similarity between their variables. Cluster 2 was made up of adolescents who had vulnerability factors in the face of repeat unplanned pregnancies because they had higher rates of current and previous unplanned pregnancies, as they adopted unsafe sexual practices in the use of the contraceptive method, justified by the lack of information and care in its use. Group 1 consisted of adolescents who scheduled their pregnancy, thus having different prediction variables from the others, such as a lower number of sexual partners and spontaneous abortions. Faced with such results, there is a need to expand and better understand the concepts about the occurrence of pregnancy at this stage of life.

Descriptors: Teenage Pregnancy; Adolescent Health; Vulnerability; Gynecology; Obstetrics.**Resumén**

El objetivo fue identificar aspectos de vulnerabilidad ante los embarazos repetidos en adolescentes según variables sociodemográficas, ginecológicas, obstétricas y anticonceptivas, y determinar si estos embarazos fueron planificados o no. Se trata de un estudio descriptivo, transversal, con enfoque cuantitativo con 323 puérperas adolescentes hospitalizadas en alojamiento conjunto de una maternidad ubicada en la región Centro-Sur de la ciudad de São Paulo durante 12 meses. Utilizando el método Two Step Cluster, se identificaron dos grupos por similitud entre sus variables. El conglomerado 2 estuvo conformado por adolescentes que presentaban factores de vulnerabilidad ante embarazos repetidos no planificados debido a que presentaban mayores índices de embarazos no planificados actuales y anteriores, ya que adoptaron prácticas sexuales inseguras en el uso del método anticonceptivo, justificado por la falta de información y cuidado en su uso. El grupo 1 estuvo formado por adolescentes que programaron su embarazo, por lo que tuvieron variables de predicción diferentes a las demás, como menor número de parejas sexuales y abortos espontáneos. Ante tales resultados, surge la necesidad de ampliar y comprender mejor los conceptos sobre la ocurrencia del embarazo en esta etapa de la vida.

Descriptorios: Embarazo en la Adolescencia; Salud del Adolescente; Vulnerabilidad; Ginecología; Obstetricia.**How to cite this article:**

Amaral ACBA, Barbieri M. Vulnerability of pregnancy recurrence among adolescents. Glob Clin Res. 2023;3(1):e41.
<https://doi.org/10.5935/2763-8847.20210041>

Submission: 01-25-2023

Approval: 03-10-2023



Resumo

Objetivou-se identificar os aspectos da vulnerabilidade frente à repetição da gestação em adolescentes segundo variáveis sócio-demográficas, ginecológicas, obstétricas, anticoncepcionais e determinar a ocorrência destas gestações serem ou não programadas. Trata-se de um estudo descritivo, transversal de abordagem quantitativa com 323 adolescentes puérperas internadas em Unidade de Alojamento Conjunto de uma Maternidade situada na região Centro Sul do Município de São Paulo durante 12 meses. Por meio do método *Two Step* de Cluster identificou-se dois grupos por semelhança entre suas variáveis. O Cluster 2 foi constituído por adolescentes que possuíam fatores de vulnerabilidade frente à repetição de gravidez não programada por possuírem maiores índices de gravidez atual e anterior não planejada, pois adotaram práticas sexuais inseguras na utilização do método contraceptivo, justificado pela falta de informação e de cuidado na sua utilização. O grupo 1 foi constituído por adolescentes que programaram sua gestação, possuíam assim, variáveis de predição diferentes das demais, como menor número de parceiros sexuais e abortamentos espontâneos. Diante de tais resultados, há a necessidade de ampliação e de melhor compreensão dos conceitos sobre a ocorrência da gravidez nesta fase da vida.

Descritores: Gravidez na Adolescência; Saúde do Adolescente; Vulnerabilidade; Ginecologia; Obstetrícia.

Introduction

Adolescence is a period marked by vulnerability because it is a stage of life with conflicts in different spheres. Striking factors that make him vulnerable are the discovery of pleasure and the prematurity of sexual initiation.

The United Nations Educational, Scientific and Cultural Organization (UNESCO), in partnership with the Ministry of Health, showed, through research carried out, that not only is sexual initiation happening at an increasingly earlier age among young people, but also brief and more intense courtships have become a trend in this period¹.

Other studies are more categorical in stating that the early onset of sexual activity, combined with misinformation regarding the proper use of contraceptive methods, age at menarche, which has been advancing over recent years, and the deficiency of assistance programs are some of the factors responsible for the increase in pregnancy, abortion and sexually transmitted diseases in adolescence².

Actions developed in the health area point to teenage pregnancy as an epidemic, particularly in poor or developing countries, and different aspects are highlighted in this theme, some involving obstetric, pediatric, psychosocial risks for mothers and children; and others involving the lack of responsibility of adolescents, partners of young women, regarding the exercise of sexual and reproductive life. In general, the assessment of pregnancy at this stage is almost always negative, not only by public institutions, the media, health and education professionals, but also by what is observed in scientific academic production itself³.

Among the consequences observed among adolescent mothers, dropout from school, withdrawal from the group of friends and from age-specific activities, in addition to limitations on employment opportunities, are more frequent. In these circumstances, the late initiation of prenatal care, the number of prenatal consultations lower than expected and the number of intentional abortions in this population group become relevant⁴.

According to the Adolescent Health Program (PROSAD), in Brazil, adolescents and young people

correspond to 30% of the population; numerically, there are 57,426,021 individuals undergoing biological, emotional and social transformation, with an almost equal proportion between genders (50.4% men and 49.6% women). The program's statistical data reveal numerical similarities in the population of younger (10 to 14 years old) and older (15 to 19 years old) adolescents in the State of São Paulo, representing 28,348,067 and 29,077,954, respectively⁵.

The total number of births among teenage mothers in the State of São Paulo reached its last peak, of approximately 730,000, in the late nineties and, since then, the trend has been downwards, registering, in 2009, 594 thousand births. Of this volume, approximately 21% correspond to births to mothers under 20 years of age⁶.

The National Survey of Demography and Health (PNDS), carried out in 2006, showed that 21% of women aged 15 to 19 years had at least one child and that the poorest young women from the less favored class had a fertility rate 10 times greater than those from better socioeconomic strata. In general, 80.3% of these births were firstborns and 19.7% corresponded to two or more children. These proportions should not be considered negligible, especially when the majority belong to disadvantaged groups of the population, in which the living conditions, access to health services or the labor market are more precarious compared to other young people in the country⁶.

Other studies make the connection that women whose motherhood began in adolescence tend to have a greater number of children throughout their reproductive life. In most cases, the first pregnancy is unplanned and sometimes even unwanted. Thus, the probability of subsequent pregnancies acquiring the unwanted character of the first becomes extremely high².

Added to this, in recent decades, the recurrence of pregnancy in this period has increased worldwide, especially in emerging countries, in view of the low level of education, family breakdown, economic instability, particularly in adolescents of low socioeconomic status⁷.

Scholars indicate that several situations make adolescents vulnerable to repeat pregnancy. Among them are the precocity of menarche and the onset of sexual life,



their family history accompanied by episodes of teenage pregnancy, the absence of the father, dropping out of school, inadequate use of contraception or difficulties in accessing health technologies⁸.

Some factors are considered triggers and significant for repeat pregnancies in this age group and are related to the age of first conception – the earlier a woman begins her reproductive life, the greater her chance of ending it with high fertility; family stability, the parents' level of education and maternal fertility itself, whose indications of influence on rapidly recurring pregnancies are important; dropout and completion of the school course, with low school performance being a clear indicator of pregnancy recurrence, as shown by studies that show that schooling is inversely proportional to the fertility of adolescents; and, finally, miscarriages, as women with a history of miscarriage are more likely to have a rapid recurrent pregnancy⁷.

Some studies also point out that adolescent mothers do not make adequate use of contraceptive methods to avoid future pregnancies, and attribute the failure of contraceptive use to side effects or lack of motivation to prevent pregnancy, which leads them to feel less prone to use contraceptives after childbirth and thus to conceive again⁷.

In an integrative review on elements of vulnerability of adolescents to HIV/AIDS, from 1996 to 2006, most studies focused on aspects of individual vulnerability, scientific evidence pointing to the lack of perception of adolescents about their vulnerability to HIV, pregnancy and repeat pregnancy. The vulnerability of pregnancy does not intend to seek to establish the mathematical probability of illness, but aims to “express the potential for illness and non-illness, related to each and every individual who lives in a certain set of conditions”. Thus, individual vulnerability increases the social vulnerability of adolescents, and most studies on vulnerability point to aspects of sexuality as the main factors that, in some way, make them vulnerable⁹.

The notion of vulnerability among adolescents has been present in several studies. Many arguments point out that a precarious fate would be reserved for the adolescent mother, and that a pregnancy would thus increase her chances of being a mother again without having planned it, which brings as a consequence the difficulty of entering the labor market. The fact of not working, in turn, by reducing their income, would considerably increase their social vulnerability¹⁰.

Teenage pregnancy and, in particular, its recurrence have been the focus of our interests, because, as is usually emphasized by society, the fact that a teenager becomes pregnant for the first time makes her learn from the positive or negative experience she has had, and effectively start to choose and decide about their sexual and reproductive health. In the assistance provided to women in the pregnancy-puerperal cycle as an obstetric nurse in Normal Childbirth Centers, in Prenatal Assistance Programs and in Rooming-In Units, the presence of young mothers as clients during periods of pregnancy, childbirth, puerperium is notable. or after episodes of miscarriage. The repetition of pregnancies in adolescents is a fact that cannot be ignored

and, as health professionals, we must be aware of the factors that make it vulnerable.

Given the above, the objective was to identify the aspects of vulnerability in the face of repeat pregnancies in adolescents according to sociodemographic, gynecological, obstetric, and contraceptive variables, and to determine whether or not these pregnancies were scheduled.

Methodology

This is a descriptive, cross-sectional study with a quantitative approach.

The research was carried out in a rooming-in unit of a philanthropic maternity hospital located in the Center-South region of the city of São Paulo. In this institution, assistance during the prenatal and delivery periods is offered to pregnant women at low obstetric risk who seek the service on spontaneous demand or referred by other referral and counter-referral services in the city of São Paulo and Greater São Paulo. The institution was founded in 1930, being responsible for the obstetric care of approximately 600 pregnant women per month, with a high incidence of adolescents, who represent approximately 45% of the population served. Financial resources come from the Unified Health Service (SUS), the São Paulo State Health Department, among others. Delivery assistance is performed at the Centro de Parto Normal by a team of obstetric nurses. Its institutional philosophy is compliance with the technical norms of humanization of childbirth, managing to reduce the cesarean delivery rate to approximately 13%. Births are reported in birth registration books as well as other internal records.

In their first contact with the service, pregnant women are evaluated by the medical team and admitted for delivery assistance. Assistance during labor and delivery are carried out in units called “PPP”, pre-delivery, delivery and post-partum. During these periods, the women remain with their companions until they are sent to the Rooming-in Units. Hospital discharge usually occurs, within normal standards, after 48 hours of delivery.

In the present study, the definition of adolescent established by the Ministry of Health was adopted, as the chronological age between 10 and 19 years¹⁰. The study population comprised 452 adolescent mothers with repeated pregnancies, but only 323 responded to the selection criteria.

Puerperal adolescents with recurrence of pregnancy were included in the study, regardless of whether their previous obstetric history was an evolution to childbirth or abortion, who formally consented to participate in the study and with the authorization of their guardian. The reason why 129 adolescent mothers did not meet the inclusion criteria was due to the fact that their legal guardians did not sign the consent form and informed consent form, a criterion considered mandatory in a study with individuals younger than 19 years of age.

Adult and primiparous mothers were excluded from the study, as well as adolescents with recurrence of pregnancy who did not agree to participate or who did not have a legal guardian at the time of data collection. Of 452



adolescent mothers with repeated pregnancies, 323 met the inclusion criteria. Thus, the study consisted of a non-probabilistic convenience sample represented by 323 adolescent mothers with repeated pregnancies admitted to the Rooming-in Unit between the months of November 2008 and October 2009.

The confirmation of the representative number of the sample was carried out through statistical calculation based on the birth rates of the 12 months prior to the collection. We considered the occurrence of 15,654 births at the site, and, of these, 1,168 deliveries of adolescents, of which 787 were of adolescents with recurrence of pregnancy. The methodology used was simple random sampling considering an interval with 95% confidence. Thus, the total sample calculated was 235 individuals, with a maximum sampling error of 5%. However, the decision to carry out the convenience sampling was due to the difficulty in fulfilling some inclusion criteria by the studied population.

Data collection began after formal authorization from the hospital institution and approval from the Ethics and Research Committee of the Federal University of São Paulo, under Opinion No. 1149/08.

The elaborated and critically revised form was pre-tested on a small sample in order to determine its clarity and understanding by the interviewees. Since the instrument corresponded to the desired expectations, data collection began with a duration of 12 months, seeking to interview all adolescent mothers with recurrence of pregnancy hospitalized from November 2008 to October 2009.

The collected data were previously coded and organized in a Microsoft Excel® spreadsheet version 2007 in Windows Vista® environment. Statistical analyzes were performed using the IBM-SPSS® version 18 program (Statistical Package for Social Sciences).

The significance level used for Student's t test was 5%. In order to know the homogeneity between the sample, in a second moment, a Multivariate Statistical Analysis method was used to segment the group into subgroups with similar subjects, seeking to build as many groups as necessary, up to a maximum limit of the number of respondents, that is, 323. Each group should have characteristics that distinguish it from the others. This technique is known as Cluster Analysis.

Cluster Analysis is a method of unsupervised classification of patterns (observations, data, or feature vectors) into groups (clusters). Clustering problems have been addressed in different contexts and by researchers in many disciplines, which reflects its great appeal and usefulness as one of the steps in exploratory data analysis. However, it is still a combinatorially difficult problem, with different assumptions¹¹, as its analysis is not directly supervised.

Some of the best known clustering techniques are hierarchical, K means and Two Step. Hierarchical clustering builds (agglomerative) or breaks (divisional) a hierarchy of clusters. The traditional representation of this hierarchy is a tree called a dendrogram, with individual elements at one end, and a single cluster containing all elements at the other end¹².

The K-means algorithm orients each point to a cluster whose center, also called centroid, is closest. The center is the mean of all points in the cluster, that is, its coordinates are the arithmetic mean for each dimension separately over all points in the cluster. The Two Step algorithm, specific to SPSS® software, is a scalable cluster analysis designed to manipulate large amounts of data. It works with categorical data and presents the possibility of identifying the ideal amount of groupings¹².

In this sense, after cleaning the data, they went through the Cluster Analysis using the Two Step method, without parameter of number of groupings so that the method itself could make this identification. Two clusters were identified. For confirmation, the categorical data were evaluated seeking statistical difference from the two clusters formed. For numerical data, Student's t test was applied, after identifying whether the variables had a normal distribution.

Through the Two Step method, two groups were identified by similarity between their variables, composing Cluster 1 with the number of 131 adolescents and Cluster 2 with the number of 41 adolescents, taking into account sociodemographic, gynecological, obstetric and contraceptive variables of important significance in the comparative analysis of Groups or Clusters.

Results

The results obtained will be presented, at first, considering the entire sample and, later, in the two subgroups according to the Cluster classification by categorical and numerical variables.

Table 1 reveals that, of the total of 323 adolescents who constituted the study, the mean chronological age expressed in years was 17.9 years, with variance between the minimum age of 13 and the maximum age of 19 years. There was a higher concentration of young people aged 19 years (37.7%), followed by 18 (30.3%) and 17 years (18.6%), among others.

The region of birth informed by them was, for the most part, the Southeast Region of the country (64.7%), followed by the Northeast (14.5%) and Midwest (10.5%), North (7.4%) and South (2.8%).

As for schooling, it can be seen that the majority had about six to eight years of study, the average expressed in years for schooling was 7.7 years, ranging from "never having studied" to "12 years" for the highest schooling. As for skin color, the group of adolescents was categorized into white and non-white, with a greater representation of white skin color (54.0%) expressed by them.

The marital status, divided into consensual union, single, married and widow among the sample members, pointed to the predominance of consensual union (50.8%), followed by single (43.7%), married (5.0%) and widows (0.6%). With regard to financial dependence, it was observed that young women are financially dependent predominantly on their parents (49.0%) and in-laws (23.2%). Family income is represented by an average of 2 to 3 minimum wages, defined, at the time of the survey, by 465.00 reais, based on the minimum wage in force during data collection. The



minimum income found was 1 minimum wage and the maximum, 4. As for occupation in the previous pregnancy, there is a predominance of adolescent home workers (66.5%), followed by students (22%) and, finally, workers outside the home (11.5%).

In relation to the current pregnancy, the situation changes, with a predominance of adolescent students (53.8%) in relation to those who work outside the home (35.7%) and, finally, housewives (10.5%).

A significant number of young people did not have a partner at the time of the interview (36%). Among adolescents with a partner, there is a predominance of age groups between 19 and 21 years (29.1%), followed by 22 to 24 years (18.0%) and 25 to 27 years (9.9%). The average age of the partners was represented by 22 years, the median by 21, with the minimum age found being 16 and the maximum being 30 years.

Table 1. Distribution of sociodemographic variables of adolescent mothers with recurrence of pregnancy. São Paulo, SP, Brazil, 2009

Variable	N	%
Age		
13	1	0,3
15	4	1,24
16	38	11,8
17	60	18,6
18	98	30,3
19	122	37,7
Minimum	13	
Maximum	19	
Average	17,9	
Median	18	
Total	323	100,0
Region of Birth		
Southeast	209	64,7
North East	47	14,5
Midwest	34	10,5
North	24	7,4
South	9	2,8
Total	323	100,0
Education		
0 – 2 years	3	0,9
3 – 5 years	15	4,6
6 – 8 years	221	68,5
9 – 11 years	83	25,7
12 years	1	0,3
Minimum	0	
Maximum	12	
Average	7,7	
Median	8,0	
Total	323	100,0
Color		
White	171	54,0
Not white	152	46,0
Total	323	100,0
Marital Status		
Consensual union	164	50,8

Single	141	43,7
Married	16	5,0
Widow	2	0,6
Total	323	100,0
Financial Dependency		
Parents	158	49,0
Parents in law	75	23,2
Partner	54	16,7
Independent	27	8,3
Uncles	6	1,9
Grandparents	3	0,9
Total	323	100,0
Family Income		
Does not know how to inform	80	24,7
1 – 2 Minimum wages	94	29,1
2 – 3 Minimum wages	97	30,0
3 – 4 Minimum wages	41	12,6
More than 4 Minimum wages	11	3,4
Minimum	1,0	
Maximum	4,0	
Average	2,0	
Median	2,0	
Total	323	100,0
Occupation in previous pregnancy		
Worked at home	215	66,5
Studied	71	22,0
Worked outside the home	37	11,5
Total	323	100,0
Occupation in current pregnancy		
Studied	174	53,7
Worked at home	155	35,7
Worked outside the home	34	10,5
Total	323	100,0
Current partner's age		
Does not have a partner	116	36,6
16-18 years	11	3,4
19-21 years	94	29,1
22-24 years	60	18,5
25-27 years	32	9,9
28-30 years	10	0,3
Minimum	16	
Maximum	30	
Average	22	
Median	21	
Total	323	100,0

The gynecological variable, represented by menarche, occurred for most girls at 11 years old (33.4%), at 10 years old for 32.8% of the sample, with a minimum of 9 and a maximum of 13 years. The mean age at menarche found among adolescents was 10.7 years and the median was 11 years. The youngest age recorded by the sample was 9 years old and the oldest 13 years old. As for the onset of sexual activity, we found an interval of its occurrence from 11 to 16 years old, noting higher rates at 13 years old (38.0%), followed by 14 years old (31.0%). The average age obtained for the first sexarch was 13.5 years old, the median, 13 years old.

The gestational interval observed for most adolescents ranged from 13 to 24 months (44.6%), followed by 1 to 12 months (40.2%). The average obtained was 18.4 months and the median, 16 months. The shortest interval found between pregnancies was one month and the longest was 60 months.

When inquiring about the young woman's mother's obstetric background as a teenager, 52.0% had 1 child and 32.8% had 2 children. The number of children they had ranged from zero to three. The average obtained was 1.3 and the median, one.

The number of sexual partners reported by most adolescents was 3 to 6 (44.2%), followed by 1 to 3 (44.0%). The average found was 3.9 and the median was 4 partners. The lowest number of partners reported by them was 1 and the highest number was 9.

As for the bond and paternity of the children of the adolescents in the sample, it is observed that, for the majority (73.0%), the recurrence of pregnancy did not occur during the same relationship or with the same partner.

As for the parity of adolescents with recurrence of pregnancy, variations were observed between 1 and 4 deliveries, including the last one. The predominance was for two deliveries (66.5%), followed by a previous delivery

(25.0%). The average number of deliveries between them was one and the median was two deliveries.

Abortion as a past obstetric antecedent was recorded with less predominance in relation to childbirth, that is, there was a greater number of deliveries (66.7%) than abortions (33.3%). As for the types of delivery, as the study institution is characterized as a place that encourages natural childbirth, normal delivery is recorded as the most common mode of birth among the adolescents studied (91.3%), followed by cesarean sections (8.4%) and by forceps (0.3%).

The reasons for the occurrence of the previous pregnancy were studied and categorized into the adolescent's desire to get pregnant, the couple's desire to get pregnant, the partner's desire, lack of care in sexual practice and lack of contraceptive information. Among the adolescents, it was observed that the lack of care in sexual practice was responsible for the majority of pregnancies (74.6%), followed by the lack of contraceptive information reported by them (15.0%). Regarding the current pregnancy, its occurrence is observed due to lack of care in sexual practice (58.5%), followed by the desire for pregnancy on the part of the adolescent (24.4%), among others.

With regard to contraceptive variables, the data reveal that, both in the previous and in the current pregnancy, most adolescents opted for an unprotected sex life with a contraceptive method. In the previous pregnancy, 68.1% did not use a contraceptive method, against 66.9% in the current pregnancy.

Among the adolescents who chose to use a contraceptive method and ended up becoming pregnant in the current pregnancy, we found the use of the male condom (16.5%), oral hormonal contraceptives (8.5%), withdrawal (5.9%), female condom (1.5%) and injectable hormonal contraceptives (0.6%) as the most prevalent methods.

Table 2. Distribution of contraceptive variables of adolescent mothers with recurrence of pregnancy. São Paulo, SP, Brazil, 2009

Use of contraceptive method in previous pregnancy	N	%
No	220	38,9
Yes	103	68,1
Total	323	100,0
Use of contraception in the current pregnancy	N	%
No	216	66,9
Yes	107	33,1
Total	323	100,0
Method used in the current pregnancy	N	%
Not used	216	66,9
Male condom	53	16,5
STEEL	28	8,5
Coitus interruptus	19	5,9
Female condom	5	1,5
Injectable	2	0,6
Total	323	100,0

Clustering

After knowing the content of the variables of the entire sample, it was decided to apply an unsupervised classification (clustering) of individuals considering all the variables collected. This clustering identified 2 (two) groups of adolescents with similar socioeconomic, gynecological, obstetric, contraceptive and vulnerabilities characteristics, not balanced in terms of number of individuals, which is characteristic of the method.

Figure 1 illustrates the distribution of the two groups identified by the similarities of their characteristics. Adolescents who remained outside the spheres are considered outliers, have characteristics among their variables that are extremely different or distant from both

groups and, as such, are not part of any of them, not even allowing the identification of a third group.

The maximum accuracy achieved was 54.1% with the identification of 2 Clusters using 26 variables. This was the best hit, since the clustering algorithm chosen was TwoStep, which identifies the best number of clusters by gathering the largest number of individuals. The identification of clusters is a process of several iterations defined a priori in the algorithm.

Figure 2 presents the 26 variables used in the general clustering of adolescents. Each cluster, however, has different significance for each of the variables and the clustering process points to the importance of the participation of all variables.

Figure 1. Comparative distribution of clusters 1 and 2 of adolescent mothers with pregnancy recurrence. São Paulo, SP, Brazil, 2009

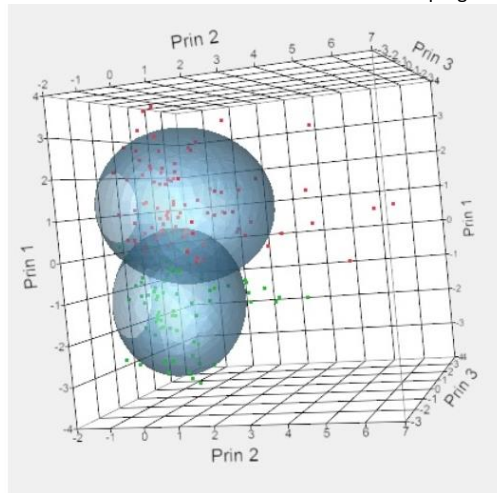
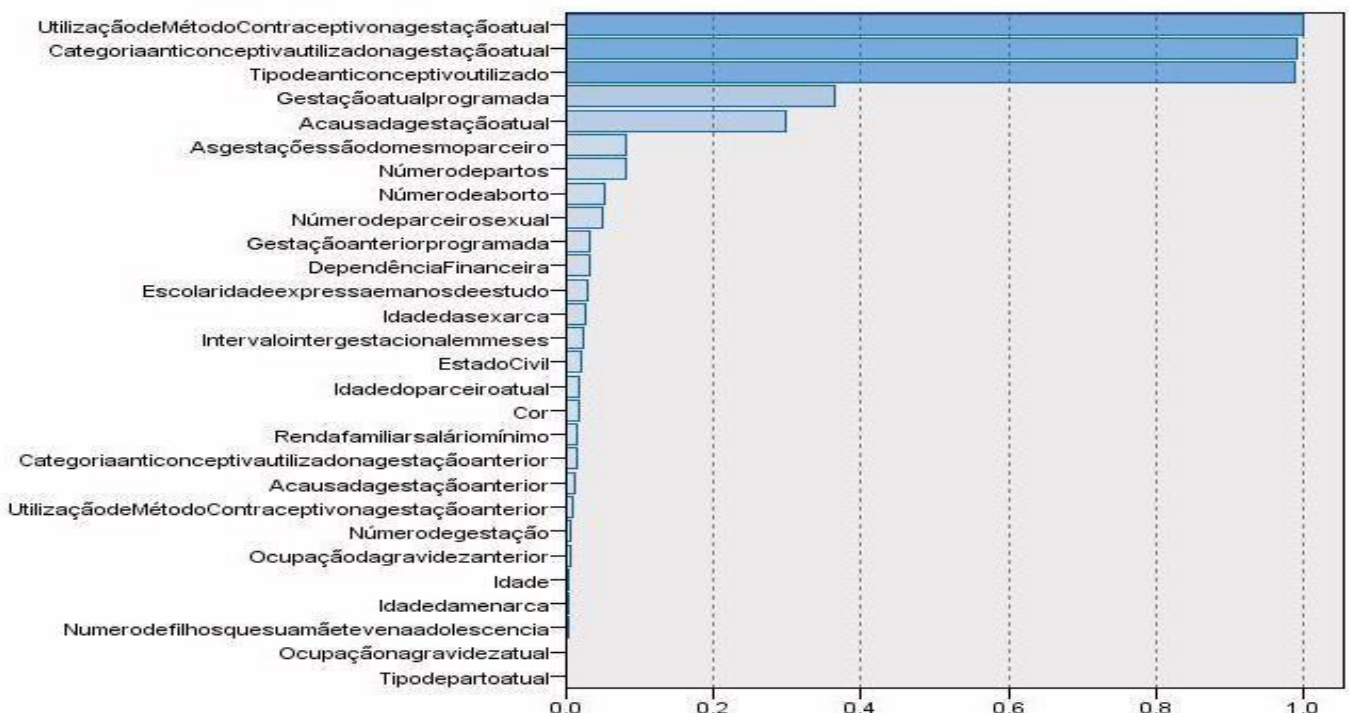


Figure 2. Distribution of the degree of importance of the variables in the participation in the general formation of the adolescent clusters. São Paulo, SP, Brazil, 2009

Variable Importance



It is noteworthy that, although 26 variables were used in the process of this work, we chose to present in the next tables and graphs only the 09 most important variables. This is due to the fact that they indicate predictive elements of vulnerability for a repeat pregnancy in adolescence, a procedure that the method allows. According to the method, the adolescents in Cluster 2 are vulnerable to unplanned repetition of pregnancy due to predictive elements, such as not using a contraceptive method, inadequate use of the barrier method in sexual intercourse and lack of care in preventing pregnancy, main reasons for its occurrence; add to this the fact that the pregnancies are not from the same partner, that there is a greater number of deliveries and lower rates of abortion.

From the 09 variables used in Cluster 1 of the adolescents, there is a different significance for each of the variables and the fact that the clustering process points to the participation of each variable, limited to the importance of 0.05 in the prediction. Cluster 1 represented adolescents who planned their current pregnancy. For this reason, they did not use contraceptive methods, justified by the desire to experience another pregnancy. These adolescents had the same partner in previous and current pregnancies, and the number of births and abortions were higher in relation to Cluster 2.

In Cluster 2 of the adolescents, different significance is shown for each of the variables and the clustering process, in which the participation of each variable is pointed out, was limited to the importance of 0.05 in the prediction. Cluster 2 represented adolescents who did not plan their current pregnancy and who used contraceptive methods. However, due to lack of information, lack of care and inappropriate use of the contraceptive method, there was no way to prevent it.

The factors that identify Cluster 2 as vulnerable to repeat pregnancies was the fact that 100% of the adolescents did not schedule their current pregnancy, making use of the male condom-type barrier method. In this case, the pregnancies occurred due to lack of information and lack of care in using the method. The adolescents in Cluster 2 had pregnancies with different partners, a greater number of deliveries and sexual partners. The age at menarche was significantly lower and the number of miscarriages too, when compared to the members of Cluster 1. In Cluster 1, there are the adolescents who planned their pregnancy and justified it by their own desire for motherhood, not using a contraceptive method. Compared to the adolescents in Cluster 2, greater marital stability is observed, since, proportionally, more permanence with the same partner is recorded in the pregnancies experienced, the age at menarche was higher, there was a smaller plurality of sexual partners, less parturition and higher rates of miscarriages.

Discussion

Adolescents are seen as individuals in whom possibilities for change lie and from whom a better prognosis for the world is expected. However, in general, they are perceived by adults as subjects who do not have autonomy

regarding their rights and desires in the sphere of sexuality and reproduction. Parents, teachers, religious leaders and health professionals end up establishing dichotomous and ambiguous values in relation to them, because, at the same time that they expect adolescents to be responsible subjects for their lives, in the civil sphere, in school education, in terms of respecting the rules in general, seem not to recognize the legitimacy of their rights and the possibilities resulting from the exercise of these rights, especially when it comes to matters such as the exercise of sexuality, contraception, pregnancy, abortion, maternity/paternity, among others¹³.

This view is shared by scholars who defend that, if adolescents do not have access to the world of regular work, health, school, their possibilities of achievement end up being themselves restricted by the fact that the psychological climate of their daily life is compromised. by the tensions and conflicts arising therefrom. Thus, the absence of a life project constitutes an element of vulnerability¹⁴.

The present study, using the Cluster method, identified two groups of adolescents with distinct socioeconomic, gynecological, obstetric and contraceptive characteristics, unbalanced in terms of number of individuals – a criterion specific to the method – and found, within the two groups, vulnerability factors and aspects regarding the desire for pregnancy that differentiate them.

The adolescents in Cluster 1 have an average age of 18.1 years, 58% are white, from the southeastern region of the country (67.2%), in a consensual union (71.8%) and are financially dependent on their partners (36%), with an average age of 22.6 years and a monthly income of 2.2 minimum wages. Schooling was expressed as 8.1 years of study. Menarche occurred at 10.9 years of age and sexual initiation occurred about three years after menarche, that is, at 13.7 years of age. In the previous pregnancy, 49% were housewives and, in the last pregnancy, 58% went back to school. As for the birth of the current child, 90.8% had normal deliveries, the children being from the same partner for 50.4% of the adolescents and the intergestational interval found in this Cluster was 18 months. The current pregnancy was planned for 63.4% of the group and, among the main reasons supporting it, was the adolescent's desire for motherhood (45.8%). It should also be noted that 98.5% did not use contraceptives and, those who used them, opted for the hormonal method (1.5%). In general, it is observed that the young members of Cluster 1 scheduled their pregnancy.

The vulnerability of the recurrence of pregnancy presented by these adolescents was studied according to the theoretical framework of Ayres¹⁵, in which the period of adolescence is characterized by social vulnerability with regard to individual preventive action in the face of a risk situation, that is, aspects related to personal characteristics, such as age, sex, race, emotional development, perception of self-protection measures, personal attitudes towards sexuality and experience, acquired knowledge about sexually transmitted diseases and the ability to negotiate safe sexual practices.



There are several studies that indicate that the best known contraceptive methods used by adolescents are, in first place, the male condom, followed by oral and injectable hormonal contraceptives². The reasons given for the fact that adolescents are aware of these methods may be related to the lack of knowledge about other methods, as well as the strong campaign by the Ministry of Health focusing on the use of condoms, as double protection¹⁶. However, it is emphasized that mentioning contraceptive methods does not necessarily mean knowing them, as the young women surveyed used them and became pregnant. The observed results lead us to believe in the need for continuous guidance, since knowledge is a necessary element for the correct use of contraceptive methods, and this lack of guidance is the main reason why the young members of this group are vulnerable to repeating unplanned pregnancy.

It is noteworthy that the occurrence of the current pregnancy as well as the previous one(s) was due to lack of care in sexual practice and lack of information or inadequate information. Nowadays, in practice, professionals are discredited by the fact that adolescents living in large centers lack information about safe sexual practices due to intense media dissemination, teaching in schools and dissemination of programs created by the Ministry of Health.

As these factors are verified, a Family Planning program reinforces the importance of establishing public policies and programs aimed at the sexual and reproductive health of adolescents and young people that encompass education, concepts and the correct use of contraceptive methods, and that offer, in addition to the method, medical and nursing follow-up aimed at preventing pregnancy (and sexually transmitted diseases). This is due to the need for information that does not only show the occasional use of methods, as the results show that the recurrence of pregnancy occurred due to the abandonment of the method, in addition to having occurred due to the inappropriate use of the method, a fact rectified by the current research².

The literature also reveals other alleged reasons for the occurrence of the new pregnancy, observing whether, among them, the following statements: "they did not think about it at the time", "they did not expect to have sexual intercourse at that moment", "they did not know any contraceptive method", "stated that their partners did not want to use it", "they did not mind getting pregnant", "they trusted their partner", "they were not careful" and, finally, "they thought the use of contraceptives was unnecessary at the moment"¹⁷.

If we consider that these adolescents have already experienced a pregnancy and understand the process of gestating, giving birth and being born, it is clear that an unplanned pregnancy experience does not always prevent them from learning and adopting safe sexual practices, since the reasons presented for the occurrence of pregnancy recurrence are perpetuated. These factors make them vulnerable due to the social dimension of vulnerability, which is related to access to the information received and absorbed, its content and quality of what is really known, the real possibilities of putting their knowledge into practice, a fact that refers to aspects morals that concern life in society,

such as gender relations, unsafe and uninformed sexual beliefs, practices and behaviors, which exposes individuals to the risk of infection and pregnancy¹⁵. This makes us reflect again on the real need to encourage young people to participate in programs for the prevention of sexually transmitted diseases and family planning, since vulnerability factors for the recurrence of pregnancy are identified.

Another vulnerability factor for the occurrence of pregnancy is related to the inconstancy of partners, which can be observed by identifying a certain plurality of partners among the young women in group 2 (most became pregnant with a different partner than the previous pregnancy), as well as by the number of sexual partners, which was higher among them. Coincidentally, other scholars point out as a factor of vulnerability for pregnancy and contamination by sexually transmitted diseases the practice of multiple partners - a practice due to the type of relationship currently experienced by young people in the "hookup" mode -, the difficulty of negotiating the use of condoms, the distancing of this population from health services and the very desire for motherhood^{18,19}.

The number of births and abortions was also pointed out as a vulnerability factor in this group, as the adolescents experienced a greater number of births and a lower number of abortions, which makes us think about individual prevention actions in the face of a risk situation, since they do not wanted to get pregnant. An unplanned pregnancy increases the risk of abandoning the baby, mistreatment, maternal neglect, postpartum depression, early weaning, causing many to experience childbirth in a negative way and end up choosing not to breastfeed.

The data obtained and presented so far refer us to aspects of vulnerability for the occurrence of repeated pregnancy within the period of adolescence and the knowledge of such factors becomes important due to the facts above. However, it is necessary to distinguish adolescents from each health service, their region, culture, family history, among other aspects. The present study reveals predictive factors that lead us to discuss the planning of the current pregnancy, justified by the desire of the adolescent and her partner for motherhood, characteristics present in the adolescents who integrated Cluster 1.

In this group, pregnancy was part of the young women's life project, being seen as a reorganizing and not disruptive element. As we noted, this group is mostly made up of young people who wanted and planned their pregnancy, did not use a contraceptive method, remained with the same partner of the previous pregnancy and wanted to start a family.

Similar studies present justifications for the occurrence of pregnancy, some coinciding with those evidenced here and others with justifications that differ from the data obtained here, such as the one related to the desire for motherhood, in which they appear as justifications, in addition to the fact that they like children, the fear of losing a partner, the desire to get pregnant, the desire to have a partner, the fact that the other child was already growing up and the possibility of the couple's reunification¹⁸⁻²⁰.



Other authors clarify that, through the subjects' statements, they realized that the pregnancy was desired, when they reported wanting to have their own home and live with their husband or boyfriend and child, reasons explained by the female social function. On the other hand, others got pregnant out of curiosity to test their reproductive system, the presence of pregnancy certifying that their body is already prepared for conception. Another important aspect was the appreciation of motherhood in adolescence, as many reported that pregnancy brought something they never had – the child –, which thus becomes the depository of many expectations¹⁹⁻²¹.

In the adolescents of Cluster 1, the number of sexual partners, childbirth and abortion was significantly lower when compared to group 2, a fact that does not make them vulnerable due to the occurrence of pregnancy, since this was desired. The Cluster method used allowed us to distinguish, within a population, vulnerability factors for planned and unplanned pregnancy.

This allows us to guide care campaigns and develop nursing interventions aimed at each group of adolescents, for those who wish and seek to become pregnant and for those who do not wish to become pregnant and end up becoming pregnant. It is necessary to accept the fact that some adolescents want to become pregnant, give birth, breastfeed, and the nurse, in his role as educator, must offer help to the family, so that, together, they establish a communication based on the management of the pregnancy-puerperal cycle without the intention of modifying the individuality of the adolescent and avoiding embarrassment and the formation of barriers between the professional and the client. Only in this way, professionals will be able, through other types of attitudes towards this group, to serve them in a differentiated way²².

Pregnant adolescents tend to start prenatal care late, which may be a complicating factor, since all the care that should be taken with the fetus and the pregnant woman in the first trimester is abandoned.

In a well-attended prenatal care, some topics in health education stand out that are essential for the health of the mother-child binomial, such as guidance on breastfeeding and consequent prevention of early weaning. It is worth mentioning that the success of breastfeeding among adolescents depends on the way in which the professional approaches the pregnant woman, since many, when starting from uncertain judgments, which place the existence of a common lack of interest of young women in

relation to breastfeeding management, fail to instruct them as they should, causing them to be unprepared for this essential moment of caring for a baby and the possible interurrences related to it, such as early weaning. Another survey confirms that adolescent mothers had a higher proportion of weaning before the child's sixth month of life, when compared with results from studies carried out with adult mothers. The possible explanation for this fact is the greater number of postpartum depression in this clientele and their return to school, which leads them to stay away from home for a long time. The lack of structure to breastfeed in the teaching places also contributes for this weaning to occur^{20,21}.

Conclusion

The study on the vulnerability of the recurrence of pregnancy among adolescents allows us to conclude that young women are divided between the desire or not for a new pregnancy.

The factors that make young women vulnerable to a recurrence of pregnancy are markedly present among those who did not plan it and are related to obstetric, gynecological and contraceptive variables. The adoption of unsafe sexual and contraceptive practices, justified by several factors, such as lack of information and non-continuity in the use of the male condom, early sexual initiation and multiple partners, continues to be perpetuated.

On the other hand, the study reveals that there are young people who planned their current pregnancy, which reinforces us to think that there was a desire for motherhood, distancing them from the vulnerability factors of pregnancy recurrence, since they remained with the same partner and had a smaller number of pregnancies.

Faced with such results, there is a need to expand and better understand the concepts about the occurrence of pregnancy at this stage of life. It is important to ensure that young people have the right to choose, promote their health and prevent risks. To this end, the existence of good quality public services that offer sexual and reproductive health care programs, including contraception and STD and AIDS prevention, are now a priority. In addition, it is also necessary to have trained professionals to assist young women in prenatal care, childbirth and the puerperium so that the entire process of the pregnancy-puerperal cycle can be experienced in a safe and healthy way.

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