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Contraceptive use among adolescents at public schools in Brazil

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ABSTRACT

Objective

There has been a growing interest in patterns of contraceptive use among adolescents, due, in particular, to the social relevance attached to pregnancy in this age group. Therefore, the objective of the study was to investigate factors associated with the use of contraceptive methods among female and male adolescent students.

Method

A cross-sectional study was conducted, by means of self-applied questionnaires, among 4,774 students ranging from 11 to 19 years of age. Prevalence with respect to the use of contraceptive methods during the first experience of sexual intercourse as well as the most recent one was calculated both separately, that is, for each of these events, and in conjunction as a measure of

consistent use. Logistic regression was carried out for simultaneous analysis of factors associated with the use of contraceptive methods and in order to calculate adjusted measures.

Results

Among the 1664 students who reported being sexually active, the factors positively associated with the consistent use of contraceptive methods among male students included a) postponing their first experience of sexual intercourse and interaction with a stable partner, b) the family as a potential supplier of contraceptive methods, and c) access to health services. On the other hand, among female students factors positively associated with the consistent use of contraceptive methods included a) recent sexual initiation, and b) having a father as their source of information regarding sexuality, contraception and STD/Aids prevention. Pregnancy was reported by 6.4% of the boys and 18.1% of the girls, its absence was associated with the consistent use of contraceptives by them (the girls) (Odds Ratio=3.83; 2.06-7.15)

Conclusions

These results confirm the complexity of determining contraceptive behavior among adolescents and therefore reinforce the need to include multi-dimensional aspects of this theme in order to ensure the efficacy of sex education programs.

Keywords

Knowledge, attitudes, practice. Contraception. Sexuality. Contraception behavior. Teen health. Gender and health.

INTRODUCTION

During the last two decades, innumerable studies have been undertaken which have focused on adolescence as a result of the transformations in the social appraisal of this group.

The World Health Organization¹⁴ defines adolescents as people ranging from 10 to 19 years of age, a definition which has been adopted in Brazil by the "Programa de Saúde do Adolescente" (Adolescent Health Program) of the "Ministério da Saúde".

Within national and foreign investigations focusing on this age group, predominant themes include, amongst others, those related to fecundity, to the use of contraceptives and pregnancy, as well as the prevention of STD/Aids. However, it is interesting to note that there are few Brazilian studies specifically centered on the determinants of the use of contraceptive methods, besides those focused predominantly on female clients of health services. More recently, a series of studies have begun to emerge which stress the importance of the role played by men in the reproductive and contraceptive choices being taken. Noteworthy among the latter is the investigation conducted within Brazil by Sociedade Civil do Bem-Estar Familiar (BEMFAM)¹ [Family Welfare Civil Society] in 1996.

Interest regarding the contraceptive behavior of Brazilian adolescents has increased due to the fact that, since 1980, within all regions of the country, the rate of fecundity has been decreasing in all other age groups except for adolescents.⁵ Thus, although pregnancy in adolescence is not a recent phenomenon, its relative significance has increased, justifying further investigation of contraception during this phase of the life course.

A comparative study based on data from the Demography and Health Survey (DHS)³ undertaken in 37 countries in development, including Brazil, verified that, almost all adolescents surveyed stated they knew of at least one contraceptive method. Nonetheless, it has become clear that, within this age group in particular, the use of contraception is small in magnitude. These conclusions are consistent with national outcomes,² indicating that contraceptive use is not necessarily directly related to knowledge among adolescents and that other determinants of use must be taken into consideration.

In the beginning of the nineties, a critical revision of the international literature concerning factors associated to the lack of contraceptive use among adolescents⁴ revealed that youth were not well-informed with respect to matters related to conception and contraception. It also disclosed that they held some erroneous beliefs, such as the idea that pregnancy never occurs before the first menstrual cycle and that one must be older in order to conceive.

One of the aspects stressed by programs directed towards adolescents, according to the literature, has been access to appropriate information. However, other issues, such as the role of the family in decisions regarding sexual behavior and contraceptive choices among adolescents have received little attention, both in the studies and in interventions targeted towards this group.

In Bahia, the "Secretaria da Saúde" and "Secretaria da Educação" (Departments of Health and Education) launched a program within the public schools 1996 entitled, "Sexual and Reproductive Health during Adolescence". The latter sought to integrate educational activities concerning sexuality and reproduction with the supply of specialized adolescent health care.

The current study ensues from a project designed to evaluate the impact of this integrated program in the acquisition of knowledge as well as on changes in attitudes and behavior among adolescents involved in it.⁷ Its objective was to identify factors associated with the use of contraception during the phase preceding intervention.

METHODS

This is a cross-sectional study, undertaken in 1997, involving students aged 11 to 19 registered at 12 Bahia State public schools, eight of which were located in the state capital (Salvador) and four in the interior of the state (within the municipalities of Itabuna and Santo Antonio de Jesus).

The sample was constructed to attend to the objectives of the evaluation of the "Sexual and Reproductive Health during Adolescence" program mentioned above. The schools were selected according to the following criteria: geographic proximity (within a radius of 5 km) to one of the health care centers participating in the project; number of registered students (at least 200 students in each target grade); level of previous cooperation with the program on the part of school administrators and teachers.

Sample size was estimated in 4,800 schools, so as to detect 50% to 60% changes in knowledge, attitude or behavior indicators, with 95% precision and 80% statistical power. Students from the sixth and the eighth grades were included so as to contemplate a broader age spectrum and to introduce educational contents concerning sex and reproduction before students became sexually active.

Data production contemplated the application of a self-applied questionnaire composed of sets of questions on general information, knowledge concerning sexuality, conception, contraception, and STD/AIDS, attitudes towards pregnancy and STD/AIDS and issues related to sexual initiation. The questionnaires were applied in 50 minutes at most, which corresponds to the period of time of one class. Teachers were asked to leave the classroom while the questionnaire was being applied. Data was collected simultaneously in all classes and grades within the sample during each school period, so as to guarantee that those responding would not be aware of the contents of the questionnaire beforehand.

The 6.0 version of Epi Info software was utilized in the construction of the data bank, with double digitation by distinct professionals. Statistical analysis was undertaken utilizing STATA 7 software.

The use of contraceptives was chosen as the dependent variable comprehending three indicators: the first and last time the individual engaged in sexual intercourse and the consistent use of contraceptives on both occasions. For analytical purposes, not knowing or not recalling whether or not contraceptives were used on these occasions was considered as equivalent to not having used them. Socio-demographic characteristics, knowledge concerning fertility conception and contraception; sexual and reproductive events, as well as those referring to social and family support were selected as independent variables.

Two indicators of knowledge were created: 1) one is related to contraception and corresponds to the sum of known contraceptive methods, varying from zero to six. This indicator was dichotomized afterwards, and the median was utilized as the cut-off point (knowledge of up to three methods and of four to six methods); 2) the second refers to fertility and conception, corresponding to the sum of correct answers to the questions on this theme, the score varying from zero to six. This score was also dichotomized afterwards (up to two correct answers and three to six correct replies).

Partnership when sexual intercourse occurred for the first time was considered stable when it involved a boyfriend or girlfriend, a fiancé or a spouse; all other situations were considered unstable partnerships (a friend, a neighbor, a stranger). The number of partners during the last six months was categorized in three levels: no partners, one partner and multiple partners (two or more partners in simultaneous or sequential relationships).

As a measure of occurrence, rates of prevalence of contraceptive use were calculated and as a measure of association, odds ratio was utilized with the respective confidence interval at 95%. Logistic regression was utilized for simultaneous analysis of the variables of interest, calculating adjusted measures.

The project was approved by the Committee on Ethics in Research of the "Universidade Federal da Bahia". Confidentiality of the information obtained was assured by the fact that questionnaires were self-applied, being identified exclusively by an identification number, without any nominal reference to the person who filled it out. The right to refuse to participate in the study was guaranteed to the voluntary participants and those responsible for them by means of a letter elaborated by the research coordinators and sent to students by the school principals, soliciting the parent(s)' agreement(s). Within the classroom, before the questionnaire was applied, all ethical aspects of the study were reiterated, conferring students with another chance to withdraw from the investigation or to stop filling out the questionnaire at any point in time.

RESULTS

Among the 5,512 students considered eligible for the investigation from which this study originated, 13.3% were absent on the day of the interview and only two students (0.0%) refused to participate in

this study. Among the 4,774 students interviewed, 1,664 (34.8%) stated they had previously engaged in sexual intercourse and were considered as the study population. Those students who stated they "did not know" whether their partner had utilized a contraceptive method in their first and/or most recent experience of sexual intercourse corresponded to 14.0% of the study population and 93.1% of the latter were men. The results obtained when these students were excluded from the study were compared to those obtained when they were included among the group who stated they had not used contraceptive methods on these two occasions. The last alternative was adopted throughout the analysis for it did not change the direction of associations and increased the precision of the results.

The proportion of young men and women that stated they had previously engaged in sexual intercourse was quite distinct, being equivalent, respectively, to 62.2% and 15.0%. Consequently, the majority of the population studied is composed of male students (74.3%). The young men were a little bit younger than the young women, with a median of 15 and 16 years of age, respectively. (Table 1)

Table 1 – Characteristics of adolescents according to sex.

Characteristics	Sex		P-value (χ^2)
	Male (N=1237) %	Female (N=427) %	
Age group			
11-14	37.5	13.8	0.000
15-19	62.5	86.2	
(Median)	(15 yrs of age)	(16 yrs of age)	
Skin color*			
Light and dark morena/ black woman	89.6	87.9	0.345
White	10.4	12.1	
Schooling			
6 th grade	57.6	37.2	0.000
8 th grade	42.4	62.8	
Currently working			
Yes	23.0	11.9	0.000
No	77.0	88.1	
Sexual and Reproductive events			
Age at sexual initiation			
11-14	77.4	32.3	0.000
15-19	22.6	67.7	
(Median)	(13 yrs of age)	(15 yrs of age)	
Type of partnership during the first experience of sexual intercourse.			
Stable**	44.7	93.7	0.000
Not stable***	55.3	6.3	
Partnership during the last 6 months			
Without a partner	24.1	7.7	0.000
Single partnership	29.3	70.5	
Multiple partnership***	46.6	21.8	

Time expired since sexual initiation			
Up to 2 years	64.0	89.2	0.000
3 years or more	36.0	10.8	
Prevalence of pregnancy*****	6.4	18.1	0.000

*N(male)= 1208; N(female)= 413.

**Including boyfriends or girlfriends, fiancés and spouses.

***Including friend and other person.

****In simultaneous or sequential relationship.

***** N(male)= 1059; N(female)= 414.

The majority of the young women interviewed were in the eighth grade (62.8%), while only 42.4% of the young men were in the same grade. A high percentage of adolescents of both sexes classified themselves as light/dark *morenos* [dark-complexioned] or black (89.0%).

The young men stated their sexual initiation occurred sooner than the young women, with medians of 13 and 15 years of age respectively. While the great majority of girls stated that the first time they engaged in sexual intercourse this occurred with a stable partner (93.7%), only 44.7% of the boys stated they had this type of partner at the time. Analysis of the number of partners in the last six months reveals that single partnership was prevalent among the young women (70.5%); whereas the young men stated they had no partners (24.1%), or that they had multiple simultaneous or sequential partnerships (46.6%). It is interesting to note that 18.1% of the young women referred to at least one pregnancy whereas only 6.4% stated they had impregnated a partner (Table 1).

The adolescents presented little knowledge of issues related to fertility and conception. The young women had a greater proportion of correct replies to questions on these issues when compared to the young men, with statistically significant differences between them (Table 2). The young men were particularly unfamiliar with questions related to the menstrual cycle, but both sexes, in the absolute majority of cases, thought that it was not possible to become pregnant before the onset of menstruation and a large portion of them believed that, during the first time they have intercourse, pregnancy does not occur.

Table 2 – Knowledge concerning contraception, fertility and conception, use and motive for not using contraceptives methods, according to sex.

Knowledge/use	Sex		P-value (χ^2)
	Male (N=1237)	Female (N=427)	
	%	%	
Knowledge concerning fertility and conception*			
High index (3 to 6 correct answers)	22.0	45.0	0.000

Mean duration of a cycle	17.4	49.9	0.00
			0
Fertile period	18.9	31.4	0.00
			0
Risk of becoming pregnant before the first menstruation	20.6	21.8	0.61
			0
Risk of becoming pregnant the first time one has sexual intercourse	49.7	64.6	0.00
			0
Risk of becoming pregnant during the first menstruation	31.3	41.0	0.00
			0
Risk of becoming pregnant when ejaculation occurs outside of the vagina.	23.5	29.5	0.01
			4
Knowledge of contraceptive methods by type			
High rate (4 to 6 contraceptive methods)	43.3	52.5	0.00
			0
Masculine preservatives	92.8	95.3	0.07
			1
The pill	71.4	93.7	0.00
			0
IUD	42.1	74.9	0.00
			0
Injection	33.1	72.8	0.00
			0
Interrupted coitus	55.5	62.5	0.01
			2
Table	23.9	52.9	0.00
			0
Use of contraceptives			
During the first sexual relationship (Prevalence)	38.6	50.8	0.00
			0
Masculine preservatives	90.1	73.5	0.00
			0
Interrupted coitus	5.6	6.5	0.64
			0
Pill	2.6	14.9	0.00
			0
Table**	0.0	1.4	0.01
			0
Others	1.73	3.73	0.11
			1
During the last time they had sex (Prevalence)	66.3	74.0	0.00
			3
Masculine preservative or Condom	60.3	43.2	0.00
			0
Interrupted coitus	15.9	26.5	0.00
			0
Pills	7.5	14.6	0.00
			0
Rhythm	2.4	2.9	0.58
			9

Others	1.2	2.6	0.053
During the first and last time they had sex (Prevalence)	36.6	46.4	0.000
During the last 6 months (Prevalence)	41.0	56.1	0.000
Motives for not using contraceptives during the last 6 months***			
I wasn't expecting to have sex	59.1	65.8	0.129
I think that contraception gets in the way	31.5	18.0	0.001
I never thought about this	14.6	6.2	0.005
Did not know where to get access to it	10.6	11.2	0.850
Did not know how to avoid pregnancy	10.2	9.3	0.738
I wanted to become pregnant	6.0	14.9	0.000
My religion doesn't permit this	2.1	2.5	0.766

*Percentage of correct replies.

**Despite the fact that p-value was calculated, values smaller than 5 were expected.

***Those that did not have sex during this period were excluded. N(males)= 479; N(females)= 161.

Almost all adolescents, both male and female, said they were familiar with some kind of contraceptive (97.4%), being that the male condom was the method most frequently mentioned (approximately 95.0%). However, among the young women, the percentage who were knowledgeable about a wide variety of contraceptive methods was considerably higher than among the young men, with statistically significant differences, except for male condoms (Table 2).

The female adolescents stated more frequently that they or their partners used some form of contraception the first and last time they had sexual intercourse (50.8% on the first time and 74% on the last time they had sex). The young women also presented a more consistent use of contraceptives (46.4%) (Table 2). Among the boys who utilized contraceptives the first time they had intercourse, almost all mentioned they preferred the condom (90.1%), a preference which was also noted among the young women, but to a lesser degree (73.5%). Among the latter, preference was divided, being the pill the second option (14.9%). The last time they had sex, the male condom was still the major informed choice for both sexes (60.3% of the young men and 43.2% of the young women), although other methods emerged as alternatives, particularly interrupted coitus (Table 2).

Upon examining sexual relations within the last six months, 41% of the young men and 56.1% of the young women stated they had used contraceptives. The most frequently cited motive for not using any form of contraception was that the occurrence of sexual encounters was unpredictable (Table 2). It is also noteworthy that 14.9% of the girls and 6.0% of the boys said that pregnancy was desired.

Factors associated with the use of contraceptives among the boys on the first time they had sex, were their age at present, ranging from 15 to 19 years old, higher level of education, the fact that they could count on the family as a potential supplier of contraceptive methods, a more advanced age and a stable partnership at the time of sexual initiation, as well as having initiated sexual intercourse more recently. The number of partners within the last six months presented a gradient of positive association with multiple partnerships and single partnerships, notably associated with the use of contraception (Table 3).

Table 3 – Association between use of contraception during the first time they had sexual intercourse and selected variable according to sex.

Variable	Sex					
	Male (N=1059*)		Female (N=414*)			
	OR	CI 95%	OR	CI 95%		
Age Group (15- 19/11- 14 yrs of age)	1.45	1.03 – 2.03	1.62	0.78 – 3.35	–	
Grade (8 th / 6 th)	1.42	1.05 – 1.94	0.76	0.47 – 1.22	–	
Age at sexual initiation (15- 19/11- 14 yrs of age)	1.61	1.14 – 2.27	0.83	0.48 – 1.43	–	
Type of partnership (stable/not stable)	1.74	1.33 – 2.29	1.11	0.43 – 2.86	–	
Time elapsed since sexual initiation (up to 2 yrs/ 3 yrs or more)	2.60	1.90 – 3.54	2.29	1.08 – 4.87	–	
Partnership during the last 6 months						
Single partner/ no partner	1.70	1.16 – 2.49	1.36	0.58 – 3.22	–	
Multiple partnership/no partners	1.99	1.39 – 2.84	1.66	0.66 – 4.13	–	
Pregnancy (no/yes)	1.09	0.63 – 1.87	3.26	1.81 – 5.87	–	
Knowledge on contraceptive methods(from 4 to 6/ up to 3 methods)	1.08	0.81 – 1.43	1.44	0.85 – 2.43	–	
Knowledge on fertility and conception(from 3 to 6/up to 2 correct replies)	1.15	0.83 – 1.57	0.93	0.61 – 1.43	–	
Access to health services within the last year (yes/ no)	1.31	0.96 – 1.78	1.28	0.81 – 2.03	–	
Mother as their source of information** (yes/no)	1.17	0.85 – 1.61	1.46	0.91 – 2.33	–	
Father as their source of information** (yes/no)	0.98	0.71 – 1.34	3.38	1.09 – 10.51	–	
Family as potential source of contraceptive methods (yes/no)	1.69	1.21 – 2.37	0.56	0.29 – 1.08	–	
Feels comfortable about speaking to mother about sexual life(yes/no)	1.08	0.79 – 1.48	1.60	0.95 – 2.68	–	

*Those that mentioned they did not know about a pregnancy were excluded.

**Information on sexuality, STD/Aids and contraception.

As for the young women, the use of contraceptives during the first time they had sexual intercourse was positively associated with sexual initiation occurring more recently and with their father being their source of information on sexuality, prevention of STD/AIDS and conception. The young women who had not yet become pregnant had 3.36 times more chances of having utilized a contraceptive method during the first time they had sex (Table 3).

The use of contraceptives by young men during the last time they had sexual intercourse remained associated to the following variables: present age – ranging from 15 to 19 years old – to a larger extent than age on occasion of the first time they had sex; stable partnership when they had sex for the first time and the fact that this occurred more recently; single partnership and a multiple partnership during the last six months. As to the women, besides being highly associated to protection from pregnancy, single partnership during the last six months seems to be a relevant factor (Table 4).

Table 4 – Association between the use of contraception in the most recent experience of sexual intercourse and selected variables according to sex.

Variable	Sex					
	Male (N=1059*)		Female (N=414*)			
	OR	CI 95%	OR	CI 95%		
Age group (15-19/11-14 yrs old)	2.2	1.63	–	1.4	0.64	–
	9	3.20		2	3.18	
Grade (8 th / 6 th)	1.1	0.83	–	1.0	0.61	–
	5	1.59		4	1.76	
Age at sexual initiation (15-19/11-14 yrs old)	1.0	0.74	–	0.7	0.39	–
	9	1.62		2	1.33	
Type of partnership (stable/ not stable)	1.9	1.45	–	0.7	0.23	–
	5	2.61		0	2.17	
Period of time since sexual initiation (up to 2 yrs/3 yrs and more)	1.4	1.03	–	1.7	0.81	–
	0	1.90		0	3.56	
Partnerships during the last 6 months						
Single partners / no partner	1.7	1.21	–	2.8	1.17	–
	5	2.52		3	6.83	
Multiple partnerships / no partner	2.3	1.69	–	2.5	0.97	–
	7	3.34		1	6.50	
Pregnancy (no/yes)	0.7	0.41	–	2.9	1.63	–
	7	1.45		1	5.19	
Knowledge concerning contraceptive methods (from 4 to 6/ up to 3)	1.1	0.87	–	0.9	0.51	–
	8	1.60		4	1.72	
Knowledge concerning fertility and conception (from 3 to 6/up to 2 correct replies)	0.8	0.63	–	0.7	0.49	–
	8	1.23		9	1.28	
Access to health services during the last year (yes/no)	1.3	0.96	–	1.5	0.89	–
	3	1.86		4	2.65	
Mother as a source of information** (yes/ no)	0.9	0.65	–	1.2	0.72	–
	2	1.29		3	2.13	
Father as a source of information** (yes/ no)	1.4	0.99	–	3.3	0.70	–
	1	2.00		9	16.45	
Family as a potential source of contraceptive methods (yes/ no)	1.4	1.03	–	0.6	0.33	–
	0	1.90		6	1.34	
Feels comfortable about speaking to mother about sexual life (yes/no)	0.9	0.71	–	1.5	0.85	–
	9	1.37		6	2.86	

*Those that mentioned they did not know about a pregnancy were excluded.

** Information on sexuality, STD/Aids and contraception.

Consistent use of contraception by young men was positively associated with age at present, ranging from 15 to 19 years old, to a higher level of formal education, to a stable partnership on occasion of their sexual initiation and to the fact that this occurred more recently, to single and multiple partnerships during the last six months, and to access to health services within the last year. Among the young women consistent use of contraception was positively associated with having initiated sexual intercourse within the last two years, with their father being their source of information on sexuality, prevention of STD/AIDS and conception; feeling comfortable about discussing their sex life with their mother, as well as being protected from a pregnancy (Table 5).

Table 5 – Association between the use of contraception during the first and last experience of sexual intercourse and selected variables according to sex.

Variable	Sex			
	Masculino N=1059*		Feminino (N=414*)	
	OR	IC 95%	OR	IC 95%
Age group (15-19/11-14 yrs old)	1.5	1.09	– 1.5	0.4 – 3.9
	3	2.16	4	
Grades(8 th / 6 th)	1.4	1.07	– 0.7	0.8 – 1.4
	6	1.99	7	
Age at sexual initiation (15-19/11-14 yrs old)	1.5	1.10	– 0.7	0.2 – 1.8
	5	2.19	3	
Type of partnership (stable/ not stable)	1.7	1.32	– 1.1	0.5 – 3.1
	4	2.28	6	
Period of time since sexual initiation (up to 2 yrs/3 yrs and more)	2.6	1.92	– 2.2	1.2 – 4.0
	4	3.61	1	
Partnerships during the last 6 months				
Single partners / no partner	1.6	1.10	– 1.4	0.2 – 3.9
	2	2.39	7	
Multiple partnerships / no partner	1.9	1.39	– 1.6	0.6 – 4.4
	9	2.86	5	
Pregnancy (no/yes)	0.9	0.57	– 3.8	2.6 – 7.5
	9	1.70	3	
Knowledge concerning contraceptive methods (from 4 to 6/ up to 3)	1.0	0.77	– 1.2	0.3 – 2.1
	3	1.38	4	
Knowledge concerning fertility and conception (from 3 to 6/up to 2 correct replies)	1.0	0.75	– 0.9	0.0 – 1.3
	3	1.42	3	
Access to health services during the last year (yes/no)	1.4	1.03	– 1.3	0.2 – 2.7
	0	1.91	0	
Mother as a source of information** (yes/ no)	1.1	0.82	– 1.3	0.7 – 2.3
	4	1.57	9	
Father as a source of information** (yes/ no)	1.0	0.75	– 3.8	1.5 – 11.8
	3	1.42	5	
Family as a potential source of contraceptive methods (yes/ no)	1.6	1.17	– 0.6	0.35 – 1.3
	3	2.28	8	

Feels comfortable about speaking to mother about sexual life (yes/no)	1.0	0.79	- 1.6	1.01 - 2.4
	8	1.48	9	

OR= Odds ratio adjusted by the remaining variables.

CI= Confidence Interval at 95%.

*Those that mentioned they did not know about a pregnancy were excluded.

** Information on sexuality, STD/Aids and contraception.

Factors related to support from the family and social support, in general, presented associations on the borderline level of statistical significance, with the exception of access to health services within the last year, which was positively associated with the use of contraception by young men on the first and last time they had sexual intercourse.

Indicators of knowledge concerning contraception as well as on fertility and conception were not associated to the use of contraceptive methods by men and women under any circumstances. This was also verified during the one to one analysis of the variables that compose this knowledge (data not presented).

DISCUSSION

Before discussing the contributions of the results, some methodological aspects must be taken into consideration.

The proportion of refusals within the study population was negligible (0.0%) and the number of losses, all of which were due to absence on the day the questionnaire was distributed, was small (13.3%).

Although the sample is not representative of the total student population, nor is it representative of the adolescents who are currently out of school, the study population presented some characteristics which they have in common with those adolescents who study at the majority of public schools in the State of Bahia or even the country as a whole. Coming, in large part, from the poorest social strata, their age is, to a large extent, out of phase with respect to the grade they are in, due to the innumerable episodes in which they are left back (fail) at the end of the school year and/or drop out and return to school.

The possibility that problems have arisen with respect to self-classification concerning sexual initiation, resulting in some kind of selection bias, must be taken into consideration. It may be, for example, that particularly among the men, a few that have not yet engaged in sexual intercourse were included in the study population, but, responding to social expectations with respect to sexual roles, they declared that they already had sexual intercourse. In contrast, particularly among the women, the exact opposite may have occurred, contributing, in this case, to their being underrepresented in the study population.

Due to the nature of the issues involved, it is not possible to validate the answers given by the students, although, in general, there has been internal consistency among the questions, with no notably observed difference between men and women.

The median age of sexual initiation was, on the average, two years less than what has been found, among both sexes, in other national studies.^{2,9} This could speak in favor of the hypothesis of male over-representation, including those that falsely declared they had already had sexual initiation. However, among the women in this study sexual initiation also occurred at an earlier age than in the national studies, which speaks against their sub-representation and relativizes the assumption of errors in classification.

In addition, an issue to be raised with respect to the calculation of median age at sexual initiation concerns the fact that a large part of the sample from which this study population originates had not yet engaged in sexual intercourse. It is known that the analysis of age distribution of a life event which only takes into consideration those that have experienced this event, with the differential inclusion of those for which it occurred precociously, results in a sub estimation of the mean value, particularly if this group constitutes a minority.¹³

As to the classification of the effect in question, that is, the assertion that these adolescents used contraceptives, it is relevant to note that this research was carried out in a school. In addition to the fact that the instrument was self-applied, this could have contributed to the super-estimation of the effect being measured, since the adolescents would tend to answer what they thought was the correct or more appropriate alternative. However, at least among the young women, the use of contraceptives was highly associated to avoiding pregnancy, which indicates the validity of the answers within this group.

The findings with respect to prevalence of the use of contraceptives during the first experience of sexual intercourse were similar to those found in a national study on the use of condoms among students,² but relatively higher if compared with a national population based survey.¹ As to the prevalence of the use of contraceptives during the last time they engaged in sexual intercourse, the values were also compatible with other national studies^{2,6} involving schools, although they were higher than those observed in the population at large.¹ This is also coherent with the association, described in the literature, between years of schooling and the use of contraceptives, particularly among women.¹

In the present study, the majority of adolescents of both sexes indicated that they were knowledgeable with respect to at least one contraceptive method, thus corroborating the findings of the BEMFAM¹ investigation, which reveals that practically 100% of Brazilian youths (aged 15 to 24) were familiar with at least one method. The condom was the most frequently mentioned method by both men and women, which may be related both to its utilization as a means of avoiding pregnancy and to the strong influence of the campaigns for the prevention of STD/AIDS. However, the women presented higher percentages of knowledge concerning all the methods included in this study, which probably reflects the tradition of contraceptive use as an exclusively female attribute.

Gender differences were so important that the analysis contemplated the two groups separately, despite the fact that there were considerably less women. As a result, many associations were not statistically significant, even though the results were consistent with other studies conducted in Brazil, notably the BEMFAM¹ investigation.

Young women's sexual initiation, (at least according to their perspective), occurred with a stable partner, and happened later than it did among the young men. During the last six months, young women remained in single partnerships more frequently, but, in a lower proportion, they stayed without partners. Women also are more knowledgeable with respect to conception and fertility and about a greater variety of contraceptive methods, but a significant portion of them did not use contraceptives during their first experience of sexual intercourse (1/2) and during their most recent experience (1/4), and less than half of them presented consistent use of contraceptive methods. As a

result, 18.1% reported at least one pregnancy, a proportion three times higher than was found among the men.

Prevalence of contraceptive use was higher among young women, both during sexual initiation and during the last time they had intercourse, resulting in a higher consistent use of contraceptives. However, the lower reference to contraceptive use among young men may only reflect their greater ignorance concerning contraceptive use by their partners, particularly in unstable relationships. The fact that men refer less frequently to the use of pills and more frequently to interrupting coitus tends to sustain this hypothesis, which is also reinforced by another result of the investigation, namely, that an inverse association between the use of contraceptives and pregnancy was only verified among the women.

However, despite these differences with respect to gender in relation to contraceptive choices, the strength of the campaigns stimulating the use of male condoms apparently prevails once again, given that it appears as the first choice, among both sexes, both in their first and last experience of sexual intercourse.

Among adolescents who engaged in sexual intercourse during the last six months and stated they did not use contraceptives during this period, the unpredictable nature of these relations was the principal motive given, by both men and women, for not having used contraceptives. Equally important among the men, in particular, was the inconvenience caused by the method (probably the male condom). Furthermore, the results indicate that 14.9 % of the young women wanted to get pregnant, a percentage similar to that found in the BEMFAM¹ investigation – 16.5% - among young people ranging from 15 to 24 years of age.

Analyzing the factors associated with the use of contraceptives, the first relevant assertion is the absence of significant statistical associations with knowledge concerning contraception, conception and fertility. This is consistent with other studies³ which reveal that greater knowledge with respect to contraceptive methods is not necessarily related to more frequent or correct use of these methods.

Since exposure and effect were studied simultaneously in this investigation, it is not possible to affirm that the knowledge revealed by the study was acquired before the first or even the last experience of sexual intercourse. However, it should be taken into consideration that the age of the study population and the short interval of time elapsed since sexual initiation draw the events being investigated closer to the moment when the questionnaire was applied. Perhaps this explains the associations found between characteristics of sexual initiation – age and type of partnership – and the use of contraceptives during the most recent experience of sexual intercourse.

The fact that an association was found between a shorter period of sexual activity and a more frequent use of contraception may, in part, be explained by an effect of memory. However, this may also express the result of recent intensification of educational activities concerning sexuality and reproductive health, both in the media and in the school context.

One of the factors positively associated with the use of contraception during the first experience of sexual intercourse was an older age at the time of initiation (15 to 19 yrs of age) among the men. The same association was not found among the women, however, the literature indicates that adolescents of both sexes tend to use contraception less when sexual initiation occurs before they are 15 years old.¹⁰

Stable partnership during the first experience of sexual intercourse is positively associated to the use of contraception among female adolescents. However the same precaution was not maintained during the most recent experience of sexual intercourse. Among the men, stable partnership was positively

associated with the use of contraceptives within the three situations investigated. Studies undertaken in other contexts, involving youth in North America⁸ and Switzerland,¹⁰ also indicate less frequent use of contraceptives during the first experience of sexual intercourse when this occurred within a casual relationship.

It is possible to assume that stability within a relationship propitiates more time for negotiating the use of contraception among partners. However, as is described in other national studies, it has been observed that among women there is a tendency to use male condoms less consistently, when the partner is well-known and becomes stable. This decision is motivated, above all, by the belief that not using condoms would be a proof of fidelity. On the other hand, upon establishing this type of partnership, women tend to opt for oral contraceptives or other methods instead of male condoms.^{2, 8}

Significant associations were found between the use of contraception by men and being able to count on the family as a potential source of contraceptive methods (probably the male condom). The same association was not verified among the women. In a Canadian study,¹¹ a positive effect of counting on parents as providers of male condoms was also observed with respect to the intent to use contraceptives among male adolescents. Among Mexican adolescents¹², it was verified that the girls who presented a high probability of using a contraceptive method were those who spoke to their mothers about sex and boyfriends. It was also observed that the young men with a lower probability of having impregnated a woman were those whose communication with their mothers was better. In a study undertaken in Rio Grande do Sul², the adolescent women interviewed, when they denied that their parents recommended they use contraceptives suggested that this would be equivalent to consenting to their engagement in sexual relationships. Perhaps this can contribute to reflection concerning one of the results of this study which seems surprising at first, namely the association between the use of contraceptive methods and having the father as their source of information, a condition which was not frequent in this group (6.6%). The results with respect to the role of the mother were not statistically significant and the data available does not make it possible to evaluate the quality of interaction the adolescents in this study and their parents.

The results of this study indicate the need for new investigations which would make it possible to obtain a greater comprehension of this and other aspects such as the role of the family in sexual and reproductive behavior of adolescents; the relation between schooling and sexuality; contraceptive choices in different kinds of affective and sexual relationships and the role played by different contexts on gender relations.

The complexity of determining contraceptive behavior among adolescents is also confirmed by the results of this investigation. It also indicates the importance of incorporating the multiple dimensions of this issue in educational programs if these are to be effective.

It seems that campaigns for the prevention of AIDS and the broad dissemination of knowledge concerning the use of male condoms may be having an influence on the prevention of pregnancy, although a great deal of sexual encounters among adolescents occur without any kind of protection. It is recommendable that intervention strategies directed towards this population group should integrate contents and activities related to the prevention of STD and sexual and reproductive care.

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