

**VULNERABILITY OF ADOLESCENT STUDENTS TO STD/HIV
IN IMPERATRIZ – MARANHÃO**

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ABSTRACT

The aim of this study was to investigate the vulnerability of adolescent students related to sexually transmitted diseases (STD) and the human immunodeficiency virus (HIV), identifying the main risk behaviors and prevention. This quantitative, cross-sectional study was performed in three public schools in Imperatriz – Maranhão, with 295 adolescents, using a structured questionnaire. The results show that: most young people (86.3%) who used a condom the last time they had intercourse, usually keep this practice, 82.8% of adolescents who understand the concept of HIV protect themselves against these infections and believe the main form of contamination is through sex, infected blood or through the placental barrier. We conclude that most teenager participants showed coherent knowledge about sexual practices and risk behaviors that make them vulnerable to STD / HIV, presenting a positive aspect for the prevention of these diseases.

Descriptors: Health vulnerability. Adolescent. Sexually transmitted diseases.

RESUMO

O objetivo deste estudo foi investigar a vulnerabilidade de adolescentes escolares em relação às Doenças Sexualmente Transmissíveis (DST) e ao Vírus da Imunodeficiência Humana (HIV), identificando os principais comportamentos de risco e de prevenção. Estudo transversal, quantitativo, realizado em três escolas públicas estaduais de Imperatriz, MA, com 295 adolescentes, por meio da aplicação de questionário estruturado. Os resultados apontam que: a maioria dos jovens (86,3%) que usaram preservativo na última relação sexual habitualmente mantém essa prática; 82,8% dos adolescentes que compreendem o conceito de HIV se protegem contra essa infecção e acreditam que a principal forma de contaminação é por via sexual, por via sanguínea ou através da barreira placentária. Conclui-se que a maioria dos adolescentes participantes apresentou conhecimento coerente sobre práticas sexuais e comportamentos de risco, que os tornam vulneráveis às DSTs e ao HIV, apresentando aspecto positivo para a prevenção destas doenças.

Descritores: Vulnerabilidade em saúde. Adolescente. Doenças sexualmente transmissíveis.

Título: Vulnerabilidade de adolescentes escolares às DST/HIV, em Imperatriz – Maranhão.

RESUMEN

El objetivo de este estudio fue investigar la vulnerabilidad de los adolescentes escolares con relación a las Enfermedades de transmisión sexual (ETS) y Virus de la inmunodeficiencia humana (VIH), la identificación de las principales conductas de riesgo y prevención. Estudio transversal, cuantitativo, realizado en tres escuelas públicas Imperatriz – MA, con 295 adolescentes a través de un cuestionario estructurado. Los resultados muestran: el 86,3% utilizó un preservativo en su última relación sexual, por lo general mantiene esta práctica, el 82,8% de los adolescentes que entienden el concepto de VIH se protegerse contra estas infecciones y cree que la principal forma de contaminación es a través del sexo, sangre infectada y por la barrera placentaria. Se concluye que la mayoría de los adolescentes mostró coherente conocimientos acerca de las prácticas y comportamientos sexuales de riesgo que hacen vulnerables a las ETS / VIH, presentando aspecto positivo para la prevención de estas enfermedades.

Descriptores: Vulnerabilidad en salud. Adolescente. Enfermedades de transmisión sexual.

Título: Vulnerabilidad de los estudiantes adolescentes a enfermedades de transmisión sexual / VIH en el Imperatriz – Maranhão.

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INTRODUCTION

The infection resulting from sexually transmitted diseases (STDs) and the human immunodeficiency virus (HIV) is a global phenomenon, presenting itself today as one of the most important public health problems. In Brazil, estimates indicate an increase in the prevalence of HIV infection among the young population from 0.09% since 2002, to 0.12%, according to recent research carried out with young people aged 17-20 years, which makes the performance of studies related to this topic extremely important. Regarding the acquired immunodeficiency syndrome (AIDS) among young people aged 15 to 24 years, there was a 2/100,000 rate for men and 1.6/100,000 for women⁽¹⁾.

In adolescence, non-adherence to prevention measures of STD/HIV, associated with the onset of a sexual active life, as well as the need for group affirmation engaging in risky behavioral experimentation, make this population more susceptible to STDs. These aggravations, in addition to the emotional factor, cause injuries and inflammation in the mucous membranes on the skin around the genitals and increase the probability of HIV infection at about ten times⁽²⁾.

During this period of life most teenagers experience a series of events that make them vulnerable to STD/HIV, namely: syndrome of normal adolescence; sexual initiation; experiment of licit and illicit drugs, all risk behaviors influenced most of the times by the social environment in which the adolescent is inserted. Thus, it is clear that vulnerability is not subject exclusively to individual risk behaviors, but also to social, cultural, economic and political factors⁽³⁾.

The primary method of STD/HIV prevention is the condom, easily acquired by men and women and made freely available by the Brazilian health services, which also brings protection not only against STD/HIV, but also against unplanned pregnancy. Despite its evident benefit, resistance to adopting this behavior in sexual practices is frequent, especially among teenagers, who rely on unsubstantiated justifications for not using it, such as for example, the fact that they do not like using it, as they trust their partner and because of the unpredictability of some sexual relations⁽⁴⁾.

In this context, the school has a fundamental role in facilitating the detection of practices that make adolescents vulnerable, and participates directly in the development of educational activities aimed at promoting the health of the student. Health education activities should be structured according to the sociocultural context experienced by adolescents in order to maximize their success. These strategies may occur in the form of lectures, workshops, group discussions, dialogues, and other activities that allow adolescents to exchange experiences and clear up their doubts⁽⁵⁾.

For the *Pesquisa Nacional de Saúde do Escolar* (PENSE) (National Survey of School Health), it is highly advisable that adolescents have access to information about their sexuality and STD and that their vulnerability be monitored through health studies⁽⁶⁾.

The development of studies focused on adolescent health is essential for the understanding of the inherent aspects of growing up and for planning educational and care actions for the prevention of STD/HIV. However, according to a literature survey, conducted from August 2011 to August 2012, in databases Latin-American and Caribbean Health Sciences Literature (LILACS) and Scientific Electronic Library Online (SciELO), no studies on this topic conducted in the Southwest Region of the State of Maranhão, Brazil, were identified. Thus, the objective of this study was to investigate the vulnerability of adolescent students in relation to STD/HIV in the city of Imperatriz - Maranhão.

METHOD

This quantitative, cross-sectional study, was conducted in the second semester of 2012, in three state public schools located in the city of Imperatriz - Maranhão, Brazil. The school system of the city of Imperatriz is composed of municipal, state and private schools. There are 20,000 students enrolled in the state public schools, divided into 30 schools, 7,000 in elementary school and 13,000 in high school.

The study population was composed of adolescents according to the following eligibility criteria: 1) adolescents of both sexes, aged 10-19 years; 2) living in the studied city; 3) properly

enrolled in the schools; 4) adolescents with authorization granted by their legal guardian, through signature of an Informed Consent Form. Those with diagnosed behavior disorder were excluded from the study. In all, the sample consisted of 295 adolescents.

Data were collected using a structured questionnaire consisting of sociodemographic and behavioral variables and regarding the prevention of STD/HIV/AIDS. Before data collection, meetings were held with the coordinators of the schools and a pilot test of the instrument was conducted in a school different from those included the research.

The data were organized into Microsoft Excel tables and then analyzed with the statistical Epi-info 3.5.3 program through absolute and relative frequency. To evaluate the association among the study variables, the Chi-square test was used, considering a significance value of $p < 0.05$.

The study was submitted to the Ethics Research Committee of the University Hospital of the Federal University of Maranhão, with the approval under legal opinion 273/11.

RESULTS AND DISCUSSION

Of the adolescents interviewed, there was prevalence of the female gender (58.3%). Regarding age, it was identified that the majority is comprised between the ages of 15-17 years, accounting for 80.7% of the sample. Among the responses regarding color/ethnicity, most titled themselves as brown (47.8%).

Regarding the marital status, 71.5% declared themselves unmarried, and 88.8% said they lived in an apartment or house with the family or their partner. Consulted authors point out that unmarried adolescents tend more to relationships with multiple partners, thus increasing the chances of acquiring STD/HIV. In contrast, living with parents during adolescence, decreases the chances of acquiring STD/HIV. From this perspective, the family is presented as reference with respect to health advice, including the importance of dialogue on sexual and reproductive issues^(7,8).

In relation to family history, it was observed that 60.3% of parents have more than eight years of school education, family income between one and two minimum wages (52.9%).

Of the adolescents interviewed, 44.1% had had their first sexual relation, with a predominance of those aged between 15 and 17 years, accounting for 27.9% of the sample. Of the respondents, 20% said that the reason that led them to have their first sexual intercourse was curiosity (Table 1).

In line with this result, studies have shown that one of the major ways of dealing with this subject on the part of adolescents to assert their autonomy is the first sexual intercourse, where they start to experience their sexuality in a more liberal fashion. Currently, sexual initiation is increasingly early, around the age of 15. When it comes to choosing the moment to become sexually active, the decision of men and women takes on different proportions; however, it is especially defined by virtue of curiosity and pressure exerted by the partner and/or peers⁽⁸⁻¹⁰⁾.

In this study, with regard to the number of sexual partners, risky sexual behavior, the following was observed: one partner (32.5%), two partners (7.8%) and \geq three partners (4.4%). This finding differs from that found in similar studies, where multiple partners was a predominant trait^(11,12).

Since the 1980's adolescents have experienced their love life quite differently from that experienced by previous generations, a fact confirmed by the diversity of forms of current relationships, such as multiple sexual partners, which represents higher possibilities of acquiring infections and even unplanned pregnancy⁽¹³⁾.

Among the subjects who reported being sexually active, most reported practicing vaginal intercourse (31.2%), while 5% said they practice oral and vaginal sex and 4.4% practiced oral sex (Table 1). It was identified that most subjects, with one (75.9%) and three or more (60%) partners, respectively, maintain only vaginal intercourse, while all the subjects that practice only vaginal and oral sex, and oral and anal sex have at least two partners, respectively. Statistical differences were identified between the group of subjects who have at least two sexual partners and present multiple sexual practices ($p=0.001$).

The studies detected are in line with these results when they confirm that vaginal sexual intercourse is still considered the prevailing sexual practice among approximately 90% of adolescents. The introduction of new types of sexual inter-

Table 1 - Distribution of adolescents in view of STD/HIV and living habits. Imperatriz, Maranhão, 2012.

Variables	F	(%)
Sexually active		
Yes	130	44.1%
No	165	55.9%
Age when		
10 to 14 years	44	14.9%
15 to 17 years	81	27.5%
18 to 19 years	5	2.0%
Not applicable.	165	55.6%
Reasons to become sexually active		
Peer influence	16	5.4%
Pressure from the partner (a)	7	2.4%
Curiosity	59	20.0%
Feeling ready	48	16.6%
Not applicable.	165	55.6%
Number of partners		
One (a)	96	32.5%
Up to two	21	7.8%
More than three	13	4.4%
Not applicable.	165	55.3%
Type of intercourse		
Oral	17	4.4%
Oral and vaginal	18	5.0%
Oral and anal	01	0.4%
Vaginal	92	31.2%
Vaginal and anal	01	0.4%
Anal	01	0.4%
Not applicable.	165	58.2%
Use of condom on first intercourse		
Yes	95	32.2%
No	35	12.5%
Not applicable.	165	55.3%
Utility of the condom		
Ignored	02	0.7%
To prevent an unwanted pregnancy, STDs, HIV, AIDS.	293	99.3%
Common forms of contamination by STD/HIV		
Ignored	33	11.2%
Sexual transmission, contaminated blood or from mother to child	260	88.1%
Kiss, hug and touch	02	0.7%
Protection against STD/HIV		
Yes	238	80.7%
No	57	19.3%
Ways to avoid contamination of STD/HIV		
Not having sex	55	18.6%
To use condom in every sexual relations	239	81.0%
Contraceptive pills	01	0.4%
Total	295	100%

course is still discreetly reported by adolescents, afraid to expose their practices for fear of repression or judgments by family and/or society, which might explain the high statistical significance of the results of the study^(5,14,15).

As for condom use on the first sexual intercourse, 32.2% reported using it. With regard to adolescents' knowledge regarding STD/HIV, 88.1% said that the frequent forms of STD/HIV infection are from sexual transmission, contaminated blood or from mother to child. Therefore, 81% of the respondents asserted that the most effective way to avoid infection is to use condoms in all sexual relations, while 18.6% of them highlighted sexual abstinence (Table 1).

Although the results of the study show adolescents' understanding regarding the main forms of STD/HIV transmission and the importance of condom use in preventing STD/HIV, it is observed there is poor adherence to condom use at the first sexual intercourse. This result is similar to many other studies. For some authors, the low rate of

condom use by adolescents at first intercourse, is related to the difficulties of negotiation between partners, especially among teenagers coming from economically disadvantaged levels of society. In addition to this justification, literature also brings conceptions of teenagers who still associate condom use as interference in pleasure during sexual intercourse^(7,9,16).

Among those that protect themselves against STD/HIV, 86.5% believe that the main form of contamination is through sex, infected blood or from mother to child ($p=0.001$) (Table 2).

The vast majority of adolescents (86.3%) who used a condom on the latest intercourse, usually keeps this practice, while the opposite occurred in those who had not used a condom on the latest sexual intercourse ($p=0.001$) (Table 3).

The findings suggest greater awareness of teenagers about the need to expand the use of condoms in all sexual relations because of the risks to which they are exposed when they do not make use of them. Such finding is corroborated by

Table 2 - Association between adolescents' knowledge about ways of infection and protection against STD/HIV. Imperatriz, Maranhão, 2012.

Forms of STD/HIV infection	Protect themselves		Do not protect themselves		Total		p
	F	%	F	%	F	%	
Ignored	13	39.4	20	60,6	33	100.0	0.001
Sexually transmitted, and Blood contamination or from mother to child	224	86.5	35	13,5	259	100.0	
Kiss, hug and touch	1	50.0	1	50,0	2	100.0	
Total	238	80.7	57	19,3	295	100.0	

Table 3 - Condom use on the latest sexual relation in adolescents. Imperatriz, Maranhão, 2012.

Habitual use of condoms	Yes		No		Not applicable		Total		p
	F	%	F	%	F	%	F	%	
Yes	82	86.3	13	13.7	-	-	95	100.0	0.001
No	15	40.5	22	59.5	-	-	37	100.0	
Not applicable	-	-	1	0.6	162	99.4	163	100.0	
Total	97	32.9	36	12.2	162	54.9	295	100	

Chi-square test ($X^2= 35.75$)

Table 4 - Concept and protection against HIV. Imperatriz, Maranhão, 2012.

HIV Concept	Yes		No		Total		<i>p</i> 0.015
	F	%	F	%	F	%	
Yes	216	82.8	45	17.2	261	100.0	
No	22	64.7	12	35.3	34	100.0	
Total	238	80.7	57	19.3	295	100.0	

Chi-square test ($X^2= 5.1842$)

other studies conducted in Brazil; data express this reality, in which 77% of adolescents with sexually active life claim to use condoms in all sexual relations^(6,17,18).

This result is consistent with those obtained in literature. Authors denote on adolescents' knowledge regarding STD/HIV, and the results indicate that they know on average five to six STD, inform about the means of acquisition and that the condom is the main way to prevent infections. The fact that teenagers know the ways of STD/HIV transmission implies their knowledge about the biopsychosocial complications of these infections. This reality is constituted as a determining factor, which raises the need for the adoption of preventive behavior^(2,9,17).

The literature further emphasizes that adolescents choose to maintain the use of condoms in all sexual relations, understand this importance also due to the high levels of young people being infected with STD/HIV, as constantly evidenced by the media; in addition, they still associate using condoms during a sexual relation to prevent unwanted pregnancy, thus recognizing possible benefits in the adoption of preventive behavior^(7,18).

It was identified that 82.8% of the adolescents understand the concept of HIV/AIDS and protect themselves against this infection. This finding was statistically significant ($p= 0.015$) and is in agreement with other results reported in the literature, where the percentage of adolescents who consider themselves well informed about HIV/AIDS is increasingly growing (Table 4).

The concept referred to HIV found in studies refers to it as the causative agent of AIDS and emphasizes, among other aspects, the condition of the main clinical manifestation of the virus, immu-

nosuppression, which contributes to the emergence of opportunistic diseases, despite the introduction of palliative treatment to those with the syndrome. Thus, it is necessary to reinforce this concept with adolescents through effective preventive measures and health education, which enable adolescents' action and reflection in face of their vulnerability to STD/HIV/AIDS^(19,20).

Teenagers are vulnerable to acquiring STD/HIV, due to several factors, among them the lack of knowledge about STD/HIV, since it involves from forms of contamination to attitudes before risk situations, the positive or negative attitude in relation to the use of the condom in sexual relations and, further, cultural, socioeconomic and religious factors^(20,20).

Failure to use condoms remains one of the main forms of vulnerability of teenagers; therefore, it is understood that individual behavior is a determining factor in the vulnerability of the infection, thus justifying the focus of individual actions.

CONCLUSION

It is concluded that most adolescents have knowledge about sexual practices and risk behaviors that make them vulnerable to STD/HIV, presenting a positive aspect to prevent these infections.

Despite reporting knowledge, such a confirmation does not mean being the only condition to lead to changes in behavior; correct knowledge can help adolescents join safe sex practices. Thus, it is clear that education and information do not predicate a change of attitude about STD/HIV; however they are facilitators for changes in sexual behavior, becoming essential to reduce the vulnerability of adolescents to these infections.

The adolescents' vulnerability to STD/HIV should always be kept in mind as a condition also influenced by the social, cultural and economic context in which they live. Thus, it is undoubtedly one of the relevant aspects to preparing actions that address the distinct realities of adolescents.

The results of the study can be utilized both for planning health education actions, and for the formulation of new public health policies aimed at teenagers, and even redesign existing policies, which include the need to foster effective preventive measures with adolescents, reinforcing their action and reflection in face of their vulnerability to STD/HIV.

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