

Vulnerability and Sexually Transmitted Infections: Knowledge Analysis of Adolescents in Public Schools of Olinda

Vulnerabilidade e Infecções Sexualmente Transmissíveis: Análise do Conhecimento de Adolescentes em Escolas Públicas de Olinda

Vulnerabilidad e Infecciones de Transmisión Sexual: Análisis del Conocimiento de Adolescentes en Escuelas Públicas de Olinda.

RESUMO

Objetivo: Analisar o conhecimento de adolescentes sobre as doenças sexualmente transmissíveis. **Método:** Pesquisa quantitativa, de corte transversal, realizada em quatro escolas públicas de Olinda com 84 adolescentes entre 12 e 18 anos. Utilizou-se questionário sociodemográfico e questões sobre infecções, prevenção e métodos de aprendizagem. **Resultados:** Observou-se baixo conhecimento sobre o tema e medidas preventivas, especialmente entre jovens com vida sexual ativa. Notou-se ainda a coocorrência entre o consumo de álcool ou outras drogas e o início da atividade sexual. Palestras escolares foram indicadas como boas opções educativas. **Conclusão:** É fundamental ampliar estudos para compreender o desconhecimento sobre o assunto e implementar estratégias de educação em saúde nas escolas. Tais ações visam impactar positivamente os dados epidemiológicos e promover o cuidado entre o público adolescente.

DESCRIPTORES: Adolescente; Doenças Sexualmente Transmissíveis; Educação.

ABSTRACT

Objective: To analyze the knowledge of adolescents regarding sexually transmitted diseases. **Method:** This is a quantitative, cross-sectional study conducted in four public schools in Olinda with 84 adolescents aged 12 to 18 years. A sociodemographic questionnaire was used, along with specific questions about infections, prevention methods, and the best ways to learn about the subject. **Results:** Low knowledge about the topic and preventive measures was observed in the studied group, especially among sexually active adolescents. Furthermore, a co-occurrence between the consumption of alcohol and other drugs and the onset of sexual activity was noted. School lectures were identified as effective options for learning about the theme. **Conclusion:** It is essential to expand studies to understand the reasons for the lack of knowledge about these diseases, and to implement health education strategies in schools to improve epidemiological data among the adolescent population.

DESCRIPTORS: Adolescent; Enfermedades de Transmisión Sexual; Educación.

RESUMEN

Objetivo: Analizar el conocimiento de los adolescentes sobre las enfermedades de transmisión sexual. **Método:** Se trata de una investigación cuantitativa, de corte transversal, realizada en cuatro escuelas públicas de Olinda con 84 adolescentes de entre 12 e 18 años. Se utilizó un cuestionario sociodemográfico y preguntas específicas sobre las infecciones, formas de prevención y mejores maneras de aprender sobre el tema. **Resultados:** En el grupo investigado hubo un bajo conocimiento sobre el tema y las formas de prevención, principalmente entre los adolescentes con vida sexual activa, además de observarse una coocurrencia entre el consumo de alcohol y otras drogas y el inicio de la actividad sexual. Las charlas en las escuelas fueron mencionadas como buenas opciones para aprender sobre el tema. **Conclusión:** Se destaca la importancia de ampliar los estudios para conocer los motivos del desconocimiento sobre estas enfermedades, además de implementar estrategias de educación en salud en las escuelas para impactar en los datos epidemiológicos sobre este público adolescente.

DESCRIPTORES: Adolescentes; Infecciones de transmisión sexual; Instituciones académicas.

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INTRODUCTION

Adolescence, defined as the period between 10 and 18 years of age, is a time marked by intense biopsychosocial transformations that impact the affective, cognitive, and relational dimensions of the individual.^{1,2} At this stage, the development and strengthening of *the self* are essential milestones for the transition to adulthood, requiring supportive social environments for young people to organize how they engage with the world.^{7,9} However, the immaturity inherent to this phase, although healthy and a driver of creativity, also makes adolescents susceptible to contemporary social issues, such as substance abuse and exposure to situations of violence.¹

With puberty and the emergence of sexual urges, the search for groups and partners intensifies, culturally associating the image of the adolescent with the idea of risk.¹¹ This perception ranges from unplanned pregnancy to susceptibility to Sexually Transmitted Infections (STIs), a reality exacerbated by social vulnerability and difficulty accessing adequate information and prevention services.^{12,16} In Brazil, the first sexual encounter occurs, on average, at age 14.9, and low condom use among young people under 25 has driven an increase in infection rates in this age group.^{20,40}

The national epidemiological profile shows that half of all STI cases—such as herpes, trichomoniasis, and syphilis—are concentrated among people aged 15 to 24.¹⁶ Of particular note is the rise in syphilis, whose detection rate in 2022 increased significantly compared to previous years, and HIV, which in Pernambuco saw a significant number of cases reported among those under 19 years of age between 2017 and 2021.^{38,39} Other conditions, such as HPV and gonorrhea, also have high prevalence, highlighting the need for effective public health strategies, ranging from immunization to the strengthening of Clinical Protocols and Therapeutic Guidelines (PCDT).^{12,27,33}

Given this complexity, adolescents are considered a priority group for health interventions. Their vulnerabilities are inseparable from the social dynamics and psychophysiological changes they experience, being directly influenced by culture and family traditions.^{12,17} Thus, for health services to foster a healthy developmental environment, it is imperative to analyze not only the profile of these young people but also the cognitive tools available to them for self-protection.¹⁰ From this perspective, the present study aimed to analyze the knowledge of adolescents in public schools in the municipality of Olinda, PE, regarding sexually transmitted infections.

METHOD

This is an observational, cross-sectional study conducted in four public schools in the municipality of Olinda, Pernambuco (two schools in the Rio Doce neighborhood, one school in the Varadouro neighborhood, and one school in the Aguazinha neighborhood), selected for convenience, where data collection was conducted using an exploratory questionnaire developed by the authors and administered to adolescents between July and September 2025.

According to data from the 2024 School Census, schools in the municipality of Olinda, which are part of the Metro Norte Regional Education Office, have an estimated 11,991 students aged 12 to 18, enrolled from the 6th grade of elementary school to the 3rd year of high school.⁴⁸

Data collection took place after obtaining consent from the Institutional Review Board (IRB) of the Pernambuco School of Health, the Department of Education, the participating schools, and the students' legal guardians, as well as the students themselves. A total of 450 Informed Consent Forms were distributed.

Dates were scheduled to explain

the research objectives and confidentiality issues involved. Subsequently, sessions were scheduled for the collective administration of the questionnaires to the adolescents.

The questionnaire consisted of 57 questions, 19 of which addressed sociodemographic characteristics and 38 of which assessed the adolescents' knowledge of various STIs. Specific questions could be answered using a Likert scale, and there was also space provided for a brief explanation of what they understood about each STI. These open-ended responses were subsequently condensed to make them quantifiable.

The collected data were tabulated in Microsoft Excel® 2013 spreadsheets and subjected to descriptive statistics. This analysis allowed for the characterization of the sample using absolute and relative frequencies, as well as the cross-tabulation of variables (bivariate analysis), such as the relationship between the onset of sexual activity and the use of alcohol and other drugs.

In accordance with Resolution No. 510/2016 of the National Health Council, this research was submitted to the ethics committee of the Pernambuco School of Health and approved by the Research Ethics Committee (CEP) under number 7,671,097 and by the CAAE under number 88001325.2.0000.5569.

RESULTS

A total of 450 consent forms were distributed across the four schools participating in the study. Of these, eighty-four adolescents had their participation authorized by a parent or guardian and/or signed their own consent form (for adolescents aged 18 years); they were authorized and agreed to participate in the study. To maintain confidentiality, the schools were designated as School A, School B, School C, and School D. School

A had 19 adolescents participating, with a mean age of 13.9 years and a median age of 14 years. School B had 25 adolescents participating, with a mean age of 16.5 years and a median age of 16 years. School C had 10 adolescents participating, with a mean age of 12.4 years and a median age of 12 years. School D had 30 adolescents participating, with a mean age of 19.9 years and a median age of 14.5 years.

Regarding gender identity, 16% of participants from School A reported having a female gender identity (FG) and 34.4% a male gender identity (MG). At School B, these figures were 32% for FI and 25% for MI. At School C, the figures were 10% for FI and 15.6% for MI, and finally, at School D, the figures were 42% for FI and 25% for MI. Two adolescents reported having a transgender gender identity, one at School B and one at School D. Transgender gender identity occurs when a person does not identify with the sex assigned at birth.

Regarding marital status, 76 adolescents were single, 1 reported living with a partner, and 7 did not respond. Regarding family income, 15 adolescents reported that their family lives on up to one minimum wage, 10 adolescents reported that their family earns up to two minimum wages, 1 adolescent reported that the family income is up to three minimum wages, 2 adolescents indicated that the family lives on up to four minimum wages, and 1 adolescent reported that the family lives on more than five minimum wages per month.

Regarding the receipt of scholarships or financial aid, 44 responded affirmatively, with Pé-de-meia being the most cited aid (34.1%), followed by Bolsa Família (24.4%). Regarding work, 8 adolescents were engaged in paid work, notably as bartenders, nannies, mason's assistants, and market vendors.

Regarding religion, 32.1% of the adolescents surveyed reported hav-

ing no religion (27), 22.6% reported being Christian (19), 15.5% reported being Evangelical Christians (13), 9.5% responded that they are Catholic (8), 6% follow African-based religions (5), 1.2% identified as Spiritists (1), 1.2% considered themselves agnostics (1), 1.2% considered themselves Jehovah's Witnesses (1), 1.2% considered themselves atheists (1), and 9.5% did not answer the question (8).

Regarding family members, 2 adolescents (2.4%) reported living only with their father, 18 (21.4%) live only with their mother, 26 (31.0%) live with both parents, and 14 (16.7%) live with neither parent, residing instead with other relatives such as grandparents, uncles, aunts, and cousins. Regarding neighborhoods of residence, it was observed that adolescents live in neighborhoods where their schools are located or in neighboring neighborhoods.

Regarding the participants' grade levels: 7 students from School C are in the 6th grade of elementary school, 2 students from School C are in the 7th grade of elementary school, 15 students from School A and 2 students from School D are in the 8th grade of elementary school, and 3 adolescents from School A, 2 from School B, and 21 from School D are in the 9th grade of elementary school. Regarding high school, the following participated in the study: 1 student in the 10th grade at School B, 14 students in the 11th grade at School B, and 12 students in the 12th grade, with 8 at School B and 4 at School D. In this case, there was a predominance of participation by students in the 8th and 9th grades of elementary school and the 2nd and 3rd grades of high school. More information on the sociodemographic findings is presented in Table 1.

Table 1 – Sociodemographic data of the adolescents surveyed.

Variable	Category	School A n (%)	School B n (%)	School C n (%)	School D n (%)
Current school year	6th Grade	0 (0.0%)	0 (0.0%)	7 (100.0%)	0 (0.0%)
	7th Grade	0 (0.0%)	0 (0.0%)	2 (100.0%)	0 (0.0%)
	8th Grade	15 (88.2%)	0 (0.0%)	0 (0.0%)	2 (11.8%)
	9th Grade	3 (11.5%)	2 (7.7%)	0 (0.0%)	21 (80.8%)
	10th Grade	0 (0.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)
	11th Grade	0 (0.0%)	14 (100.0%)	0 (0.0%)	0 (0.0%)
	12th Grade	0 (0.0%)	8 (66.7%)	0 (0.0%)	4 (33.3%)
Father's Education Level	Incomplete elementary school	1 (16.7%)	2 (33.3%)	1 (16.7%)	2 (33.3%)
	Completed Elementary School	0 (0.0%)	0 (0.0%)	1 (100.0%)	0 (0.0%)
	Incomplete High School Education	1 (20.0%)	3 (60.0%)	0 (0.0%)	1 (20.0%)
	High School Graduate	3 (16.7%)	5 (27.8%)	2 (11.1%)	8 (44.4%)
	Completed Higher Education	0 (0.0%)	2 (66.7%)	0 (0.0%)	1 (33.3%)
Mother's Education Level	Incomplete Elementary School	2 (15.4%)	4 (30.8%)	0 (0.0%)	7 (53.8%)
	Completed Elementary School	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (100.0%)
	High school (incomplete)	0 (0.0%)	3 (75.0%)	0 (0.0%)	1 (25.0%)
	High School Graduate	5 (20.8%)	7 (29.2%)	3 (12.5%)	9 (37.5%)
	Incomplete Higher Education	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (100.0%)
	Completed Higher Education	1 (33.3%)	2 (66.7%)	0 (0.0%)	0 (0.0%)
Family income	Up to 1 minimum wage	1 (6.7%)	7 (46.7%)	0 (0.0%)	7 (46.7%)
	Up to 2 minimum wages	2 (20.0%)	3 (30.0%)	1 (10.0%)	4 (40.0%)
	Up to 3 minimum wages	0 (0.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)
	Up to 4 minimum wages	0 (0.0%)	1 (50.0%)	0 (0.0%)	1 (50.0%)
	More than 5 minimum wages	0 (0.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)
Scholarship or financial aid?	Yes	9 (20.5%)	18 (40.9%)	4 (9.1%)	13 (29.5%)
	No	7 (21.2%)	6 (18.2%)	4 (12.1%)	16 (48.5%)
Do you work?	Yes	0 (0.0%)	6 (75.0%)	1 (12.5%)	1 (12.5%)
	No	18 (24.7%)	18 (24.7%)	8 (11.0%)	29 (39.7%)
Have you ever used alcohol?	Yes	2 (6.3%)	13 (40.6%)	1 (3.1%)	16 (50.0%)
	No	16 (36.4%)	10 (22.7%)	8 (18.2%)	10 (22.7%)
Have you ever used drugs?	Yes	0 (0.0%)	3 (60.0%)	0 (0.0%)	2 (40.0%)
	No	12 (26.1%)	12 (26.1%)	6 (13.0%)	16 (34.8%)
Which?	Heroin/clonazepam	0 (0.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)
	Marijuana/antidepressants	0 (0.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)
	Marijuana/cocaine/loló	0 (0.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)
	Loló	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (100.0%)
Do you smoke?	Yes	0 (0.0%)	1 (33.3%)	1 (33.3%)	1 (33.3%)
	No	19 (24.1%)	24 (30.4%)	9 (11.4%)	27 (34.2%)
Do you have children?	Yes	0 (0.0%)	2 (100.0%)	0 (0.0%)	0 (0.0%)
	No	18 (22.2%)	23 (28.4%)	10 (12.3%)	30 (37.0%)
Age at birth	Abortion	0 (0.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)
	15 Years	0 (0.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)

Source: Public schools in Olinda, Pernambuco, Brazil.

When the criterion was the age of onset of sexual activity, the information is detailed

in Table 2. An important finding regarding School D is the greater variation in the age

of onset of sexual activity, which, in this case, ranged from 7 to 18 years of age.

Table 2 – Mean and median for each school regarding the age at which adolescents began sexual activity.

School	N	Mean (SD)	Median (Min-Max)	Escola D n (%)
School A	19	12.8 (1.33)	13.0 (11–15)	0 (0.0%)
School B	25	15.1 (1.44)	15.0 (13–18)	0 (0.0%)
School C	10	0 (0)	0 (0)	2 (11.8%)
School D	30	14.1 (2.62)	14.0 (7–18)	21 (80.8%)
Total:	84			

Source: Public schools in Olinda, Pernambuco, Brazil.

Table 3 presents details regarding the analysis of data related to biolog-

ical sex, onset of sexual activity, and knowledge about STI prevention.

Table 3 – Frequency distribution of adolescents by biological sex who have already become sexually active in relation to knowledge about STI prevention.

Knows how to prevent			
Gender	Sexual activity	No n (%)	Yes n (%)
Female	Sim	12 (57.1%)	9 (42.9%)
	Não	22 (73.3%)	8 (26.7%)
Male	Sim	12 (75.0%)	4 (25.0%)
	Não	14 (87.5%)	2 (12.5%)

Source: Public schools in Olinda, Pernambuco, Brazil.

Regarding the methods of STI prevention listed by adolescents, the response “using a condom” was predominant at 66.7%, followed by “using a condom and abstaining from sexual intercourse” in 8.3% of cases. Other methods cited were “using a condom and, if you have a sore, not touching another sore” (4.2%), “not having direct contact with other people’s blood” (4.2%), “using condoms and birth control” (4.2%), “using condoms, medication, and tests” (4.2%), and 4.2% reported not knowing how to explain.

Regarding alcohol consumption, with-

out taking sexual activity into account, the number of adolescents who reported using this substance was higher at School B (40%) and School D (50%). Regarding the types of other drugs used, the following were cited: heroin, cocaine, marijuana, loló (a substance made from chloroform and ether, popularly known as “perfume spray”), and antidepressants (with the intention of inducing psychological effects). Regarding cigarette use, 3 adolescents reported having used them.

Regarding children, two adolescents from School B answered affirmatively; one of them was 15 years old when she became a mother, and the other stated that

her child “was not born.” Given the nature of the question, it cannot be determined whether this was a spontaneous or induced abortion.

When analyzing the data regarding the onset of sexual activity and the consumption of alcohol and other drugs, we arrived at the following figures: 71.9% of adolescents who have consumed alcohol have already become sexually active, and 75% of adolescents who have not consumed alcohol have also not become sexually active. This pattern also held true when analyzing data regarding the consumption of other drugs. Additional information is presented in Table 4.

Table 4 – Alcohol and Other Drug Use and Onset of Sexual Activity.

Started Sexual Activity			
Variable	Category	YES n (%)	NO n (%)
Alcohol	No	11 (25.0%)	33 (75.0%)
	Yes	23 (71.9%)	9 (28.1%)
Drugs	No	16 (34.8%)	30 (65.2%)
	Yes	5 (100.0%)	0 (0.0%)

Source: Public schools in Olinda, Pernambuco, Brazil.

Building on the results obtained, we analyzed adolescents' knowledge regarding STIs, whether or not they know how to prevent them, and whether they know a lot (CM), know a little (CP), do not know (NC), would like to know a little (GSP), would like to know a lot (GSM), or do not want to know (NQS). Further details are provided in Table 5.

It was observed that the school whose adolescents most frequently reported knowing what STIs are was

School B (46.9%), and the school whose adolescents reported knowing the least about what STIs are was School D (40.4%). Regarding knowledge of how STIs are transmitted, the school where adolescents reported knowing the most was School B (57.1%), and the school where participants reported knowing the least about how STIs are transmitted was School D (38.1%).

Regarding knowledge of how to prevent these infections, the results by school followed the same pattern as

before, showing that at School B, 52.2% of adolescents reported knowing how to prevent them, whereas at School D, 36.7% of students reported not knowing how to prevent them.

The STIs surveyed were: HIV, hepatitis, syphilis, herpes, HPV, gonorrhea, and chlamydia, as detailed in Table 4. The schools that most frequently reported a lack of knowledge about STIs were also the ones that indicated they would like to know a little or a lot about the STIs mentioned.

Table 5 – Distribution of knowledge about STIs in relation to each one and the participating schools.

Variable	Category	School A n (%)	School B n (%)	School C n (%)	School D n (%)
About STIs	CM	2 (50.0%)	1 (25.0%)	0 (0.0%)	1 (25.0%)
	CP	10 (33.3%)	8 (26.7%)	0 (0.0%)	12 (40.0%)
	NC	2 (11.1%)	4 (22.2%)	4 (22.2%)	8 (44.4%)
	GSP	3 (13.0%)	9 (39.1%)	6 (26.1%)	5 (21.7%)
	GSM	1 (25.0%)	1 (25.0%)	0 (0.0%)	2 (50.0%)
Do you know what is HIV?	NO	15 (22.4%)	20 (29.9%)	8 (11.9%)	24 (35.8%)
	YES	4 (25.0%)	5 (31.3%)	2 (12.5%)	5 (31.3%)
About HIV	CP	8 (29.6%)	8 (29.6%)	3 (11.1%)	8 (29.6%)
	NC	6 (23.1%)	6 (23.1%)	3 (11.5%)	11 (42.3%)
	GSP	0 (0.0%)	6 (35.3%)	4 (23.5%)	7 (41.2%)
Do you know what hepatitis is?	NO	19 (23.5%)	22 (27.2%)	10 (12.3%)	30 (37.0%)
	YES	0 (0.0%)	3 (100%)	0 (0.0%)	0 (0.0%)
About Hepatitis	N/A	11 (28.2%)	9 (23.1%)	6 (15.4%)	13 (33.3%)
	CP	7 (43.8%)	5 (31.3%)	0 (0.0%)	4 (25.0%)
	GSP	0 (0.0%)	3 (20.0%)	3 (20.0%)	9 (60.0%)
Do you know what syphilis is?	NO	18 (22.5%)	23 (28.7%)	10 (12.5%)	29 (36.3%)
	YES	1 (25.0%)	2 (50.0%)	0 (0.0%)	1 (25.0%)
About syphilis	NC	12 (32.4%)	7 (18.9%)	5 (13.5%)	13 (35.1%)
	CP	6 (30.0%)	8 (40.0%)	1 (5.0%)	5 (25.0%)
	GSP	0 (0.0%)	4 (26.7%)	3 (20.0%)	8 (53.3%)
Do you know what herpes is?	NO	18 (24.7%)	15 (20.5%)	10 (13.7%)	30 (41.1%)
	YES	1 (9.1%)	10 (90.9%)	0 (0.0%)	0 (0.0%)
About herpes	N/A	12 (30.8%)	5 (12.8%)	6 (15.4%)	16 (41.0%)
	CP	6 (28.6%)	9 (42.9%)	0 (0.0%)	6 (28.6%)
	GSP	0 (0.0%)	4 (33.3%)	3 (25.0%)	5 (41.7%)
Do you know what HPV is?	NO	18 (22.0%)	24 (29.3%)	10 (12.2%)	30 (36.6%)
	YES	1 (50.0%)	1 (50.0%)	0 (0.0%)	0 (0.0%)
About HPV	N/A	12 (25.5%)	14 (29.8%)	5 (10.6%)	16 (34.0%)
	GSP	0 (0.0%)	5 (26.3%)	4 (21.1%)	10 (52.6%)

Do you know what gonorrhea is?	NO	19 (24.4%)	20 (25.6%)	9 (11.5%)	30 (38.5%)
	YES	0 (0.0%)	5 (83.3%)	1 (16.7%)	0 (0.0%)
About gonorrhea	N/A	12 (29.3%)	9 (22.0%)	5 (12.2%)	15 (36.6%)
	CP	3 (23.1%)	8 (61.5%)	1 (7.7%)	1 (7.7%)
	GSP	1 (5.0%)	4 (20.0%)	4 (20.0%)	11 (55.0%)
Do you know what chlamydia is?	NO	19 (22.9%)	24 (28.9%)	10 (12.0%)	30 (36.1%)
	YES	0 (0.0%)	1 (100%)	0 (0.0%)	0 (0.0%)
About Chlamydia	NC	15 (31.3%)	11 (22.9%)	6 (12.5%)	16 (33.3%)
	GSP	1 (5.3%)	5 (26.3%)	3 (15.8%)	10 (52.6%)

Source: Public schools in Olinda, Pernambuco, Brazil.

Finally, adolescents were asked about good places or ways to learn about the topic. The main findings show that in 82.9% of cases, adolescents believe that lectures are good options for learning about the topic; 78.6% believe that health professionals in schools are good learning resources; 77.4% believe that TV campaigns are effective; and 75.6% believe that school is a good place to learn about these issues. An interesting finding was that 58.3% of the adolescents surveyed do not believe that talking with friends is a good option for learning about STIs.

DISCUSSION

The increased exposure of young people to STIs is also due to greater sexual freedom, the ease of forming intimate relationships at an early age, the various stimuli propagated by media and cultural networks, and the lack of access to information and discussions about sexuality and contraception.⁴²

The family environment is a place of support and the creation of bonds that are fundamental to maintaining a sense of protection and respect. Studies indicate that living with parents is a protective factor against risky behaviors.¹⁸ As found in the results of the survey of adolescents in Olinda, 31% of them reported living with both a father and a mother. A

significant percentage of adolescents living only with their mother (21.4%) was also recorded. In the case of single-parent families, female overload may occur, particularly in the most vulnerable families, which can create an unstable environment that fails to deter adolescents from engaging in risky behaviors.¹⁸

Despite the importance of family ties in preventing risky situations, it is common for adolescents to have difficulty addressing this topic, both because they deny their sexual desires and because of the tendency of families to prolong childhood, in addition to the belief in omnipotence and the assumption of “immortality” present in adolescents.¹⁸

Regarding religion, 35.5% of the adolescents surveyed reported having no religion (27), contrasting with the findings of another study whose results indicated that 62.75% of adolescents were Catholic.¹³

Most participants indicated that STI prevention relies on condom use. In general, when compared to other age groups, adolescents use condoms more frequently, although the rates are not satisfactory, given that condom use is linked to beliefs and values and to the misconception that condom use compromises male erection.^{42,43}

Regarding the onset of sexual activity, this study found an average age of 12.8 to 15.1 years, as detailed in Table 1. At School D, there was a greater variation in the age of sexual

debut, which in this case ranged from 7 to 18 years of age. Due to the nature of the question, it cannot be asserted that this sexual initiation at age 7 is related to any type of sexual abuse. Research indicates that, in Brazil, the onset of sexual activity occurs between 13 and 15 years of age, with no significant differences by sex.¹⁸

Regarding the use of alcohol and other drugs, the results of this study showed an association between sexual activity and the use of psychoactive substances (71.9%). A national study found that, during adolescence, the brain areas linked to the reward system develop before those linked to judgment and decision-making, suggesting greater susceptibility to risky behaviors and their consequences, such as a higher probability of contracting an STI or becoming pregnant during adolescence.¹⁸

Other findings indicated that adolescents know little or nothing about STIs in 40 to 44% of cases, as shown in Table 4. It is known that access to information directly impacts the number of STI cases, according to research data that analyzed access to information in different Brazilian cities where students received less information about STIs, including Recife—which is part of the metropolitan region that includes Olinda, and is also known as a sister city—indicating a decline in access to information over the past 10 years.¹³

Another study also indicated that when adolescent students were asked

about the frequency with which they encounter information on STIs in schools, 38.77% had no recollection of receiving such information, and 20.40% reported that it was rare to receive any information on this topic.⁷

CONCLUSION

The findings of this study highlight not only the level of knowledge among adolescents but also the cultural barriers that permeate discussions on the topic. The low acceptance observed during the administration of the questionnaires may indicate that, despite access to information, addressing the topic of sexuality still generates discomfort and/or resistance among adolescents.

Efforts to expand adolescents'

knowledge of STIs and reduce the number of cases in this population must take into account the sociopolitical context and the culture of the community in which these young people are embedded in order to be effective. It is in this sense that the family, society, and the State share responsibility for improving sexual education for adolescents.

Given its proximity to the adolescent population and the large number of adolescents gathered in the same space, the school is a key setting for promoting condom use and healthy sexuality. The link between health and education, exemplified by the School Health Program, offers the potential to expand activities promo-

ting sexual and reproductive health among adolescents.

It is important to incorporate this topic more firmly, particularly in school grades where students are already beginning their sexual lives, with the aim of reducing risks among the sexually active adolescent population. Such a strategy will be effective if there is a greater presence of qualified educators and health professionals in schools.

Further studies on this topic are also needed to understand why adolescents lack knowledge about STIs, associate sexual activity with alcohol and other drug use, and show little interest in participating in research on the subject.

REFERENCES

- Guimarães A. Ontologias da adolescência e ato infracional: uma revisão integrativa da década (2011–2020). *Physis: Revista de Saúde Coletiva* 2023; 33: 1–28.
- Brasil, Ministério da Saúde, Secretaria de Atenção à Saúde, Departamento de Ações Programáticas e Estratégicas. Proteger e cuidar da saúde de adolescentes na atenção básica. 2a. Ministério da Saúde: Brasília, 2018 https://bvsms.saude.gov.br/bvs/publicacoes/proteger_cuidar_adolescentes_atencao_basica_2ed.pdf (accessed 7 Jul2024).
- Donald Winnicott. Tudo Começa em Casa. 3a. São Paulo, 1999.
- Bandura A, Azzi R, Polydoro S. Teoria Social Cognitiva: conceitos básicos. 2008.
- Anna Freud. O Ego e os Mecanismos de Defesa. Porto Alegre, 2006.
- Brasil, Ministério da Saúde, Secretaria de Vigilância em Saúde. Protocolo Clínico e Diretrizes terapêuticas para Atenção Integral às Pessoas com Infecções Sexualmente Transmissíveis (IST). 2022.
- Kramer DG, Brasil EM, Medeiros JAS, Soare AA, Nascimento ABD, Souza GP, et al. Percepção dos adolescentes das escolas públicas do interior do estado do Rio Grande do Norte sobre Infecções Sexualmente Transmissíveis. *Rev Mundi Saúde Biológicas*. 2021 jan/jun;6(1).
- Moreira GBC, Martins GBBS, Pêret ISA, Pires LCS, Ribeiro LFC, Santos LI, et al. Adolescentes e as Infecções Sexualmente Transmissíveis: comportamentos de risco e fatores contextuais que contribuem para o aumento da incidência no Brasil. *Rev Interdisciplinar Ciências Médicas*. 2021;59–66.
- Brêtas JR da S, Ohara CV da S, Jardim DP, Muroya R de L. Conhecimentos de adolescentes sobre Doenças Sexualmente Transmissíveis: subsídios para prevenção. *Acta Paulista de Enfermagem* 2009; 22: 786–792.
- Domingues CSB, De Lannoy LH, Saraceni V, Da Cunha ARC, Pereira GFM. Protocolo Brasileiro para Infecções Sexualmente Transmissíveis 2020: vigilância epidemiológica. *Epidemiologia e Serviços de Saúde* 2021; 30. doi:10.1590/S1679-4974202100002.esp1.
- Brasil, Ministério da Saúde, Secretaria de Vigilância em Saúde. Sifilis 2022 Boletim Epidemiológico. 2022.
- Miranda AE, da Silveira MF, Pinto VM, Alves GC, de Carvalho NS. Protocolo Brasileiro para Infecções Sexualmente Transmissíveis 2020: infecções que causam cervicite. *Epidemiologia e Serviços de Saúde* 2021; 30. doi:10.1590/S1679-4974202100008.esp1.
- Souza MEDS. O uso de podcast como ferramenta pedagógica para a aprendizagem da Tricomoníase no ensino médio [monografia]. Vitória de Santo Antão: [Instituição não especificada]; 2023.
- Pernambuco, Secretaria de Saúde, Secretaria Executiva de Vigilância em Saúde. Informe HIV e Aids PE 2022. 2022.
- Brasil, Ministério da Saúde, Secretaria de Vigilância em Saúde em Ambiente. Secretaria de Vigilância em Saúde e Ambiente HIV e Aids 2023. Brasília, 2023.
- Brasil, Ministério da Saúde. Manual de normas e procedimentos para vacinação. Brasília, 2024 http://bvsms.saude.gov.br/bvs/publicacoes/manual_normas_procedimentos_vacinacao.pdf.
- Interdisciplinaridade e Evidências no Debate Educacional (IEDE); Fundação Lemann. QEdU: Censo Escolar: Olinda - PE [Internet]. São Paulo: IEDE/Fundação Lemann; c2025 [citado 2026 Jan 13]. Disponível em: <https://qedu.org.br/municipio/2609600-olinda/censo-escolar>
- Instituto Brasileiro de Geografia e Estatística (IBGE). Coordenação de População e Indicadores Sociais. Pesquisa nacional de saúde do escolar: análise de indicadores comparáveis dos escolares do 9º ano do ensino fundamental municípios das capitais: 2009/2019. Rio de Janeiro: IBGE; 2022. 193 p. (Estudos e pesquisas. Informação demográfica e socioeconômica, ISSN 1516-3296; n. 46).