

The Educational System Against Sexually Transmitted Diseases: Optics in the Brazilian School Context

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Abstract: The aim of this study was to contribute to the teaching of sexually transmitted diseases (STDs) in high schools. The study was done from the research knowledge about STDs of 61 students from two schools of Rio Claro - SP, Brazil: A state and a private school, through a questionnaire (pre-test) and an interview with two biology professors, and each one from each school. The results indicated that, in general, the students in the private school had more knowledge about the subject. The public school students showed more problems with knowledge about the symptoms of STDs. In those two schools, the knowledge on the subject proved to be generic and superficial. According to the biology teachers, both of them teach about the content, and the teaching material contains themes of sexuality and STDs. From these results, an intervention was developed with students, using methods such as group dynamics and lecture dialogued lessons. After the intervention, there was an increase in the percentage of correct answers for the students of both schools (post-test) which shows that it was effective. We conclude that this work has achieved the objective of clarifying the theme to the students, but lack the schools a better dialogue with them for the planning of this content, since, although it is foreseen the your teaching, you're not going on an apprenticeship.

Keywords: *Adolescents; sexually transmitted diseases; education and health; sexual education; high school*

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0 Introduction

What motivated this work was the interest in knowing more about the incidence of sexually transmitted

diseases (STDs) in adolescence, understanding for what reasons young people are so affected by these diseases and understand if the knowledge they have about it relates to the type of schools attended, whether private or public. Thus, in the discipline of practice as a curricular component in the course of Biological Science Degree at Unesp - Rio Claro Campus, Brazil, it was possible to start this study and, thus, to develop a concrete project. Adolescence is a period of transition between childhood and adulthood, where young people undergo intense development and major transformations. All the changes that occur can interfere with the natural process of maturity and training, leading to the curiosity that leads young people to experience some behaviors that make them more vulnerable to health risks, including the sexual aspect. By being vulnerable, we are understanding the factors that are present in their environment and that in the interaction with the aspects inherent to the phase of adolescence can increase a negative result in the presence of risk^[1]. Due to this, it is necessary at this stage of their lives for these adolescents to receive correct information about sexuality, risks, precautions, and care, especially because they start their sex life. Information does not guarantee knowledge, but it is its basis. Knowledge builds on information; it results from the interaction of the subject with the object and has to do with the personal interpretation, which by experience, confers meaning to the object. It is the way information captured and content learned. This apprehension is totally individual and personal, but it has a link with universal knowledge and the scientific community^[2]. We are talking here about empirical knowledge, not necessarily scientific, since this is what one intends to construct with the student, including from what he knows. This information can come from

a variety of sources, such as family, friends, and school. However, some studies indicated that the family is not widely cited as a source of information about sexuality and STDs^[3]. The studies affirm that parents have difficulties to approach the topic sexuality with their adolescent children because they did not have room for it when younger^[4]. Thus, parents assign this role to the school and the school, in turn, has difficulties in fulfilling it, because teachers often feel unprepared. On the other hand, we have the school as an important instance for health education, therefore, should contemplate subjects such as STD/AIDS, sexuality, and drugs^[3]. Checking the National Curricular Parameters (NCP) prepared by the Ministry of Education (MEC), it can be observed that this subject is included in the program, within the transversal themes^[5]. It occurs that, in several regions of Brazil, this function is not adequately exercised, either due to lack of human, financial or material resources that work with this theme which is based on the results obtained in the literature. For there to be sexual orientation in school, it is necessary that there be teachers who feel prepared to play such a role. It should be remembered that this difficulty is not unrelated to the social and economic issues that determine the Brazilian educational system. Although the thematic sexuality is incorporated in the NCP as a cross-cutting theme and should be treated by teachers of any discipline, this role is usually attributed only to science and biology teachers. However, teachers still do not have subsidies for work social issues such as values, prejudices and taboos involving this theme and as a result end up restricting only to biological aspects of sexuality^[4]. Teachers still feel insecure with their own knowledge to talk to their students if using, thus, almost exclusively, knowledge of the books of science and biology. Therefore, the main teachers, and sometimes the only ones responsible for working the subject with the students, and nevertheless only with the content brought in the textbooks, end up being teachers of these disciplines, which boils down to the physiology of reproduction, anatomy, and traditional themes of adolescence such as pregnancy prevention and STD/AIDS^[6]. It is known that the young population is considered the most vulnerable to STDs, mainly HIV^[7]. According to data from the World Health Organization, the majority of young people start their sex life at an earlier age, usually between 12 and 17 years^[8]. It is estimated that in Brazil, every year, 4 million young people become sexually active and around 12 million

STDs a year occur, of which one-third in individuals under the age of 25^[9]. Thus, the lack of knowledge about STD infection and the lack of information on preventive methods facilitate sexual transmission, making clear the need to adopt more efficient educational practices in the school environment. In this context, the purpose of this study was first to compare the knowledge about STDs in a state school and a particular high school, and after this survey, investigate if the professor of biology addresses this topic and, finally, contribute to a pedagogical intervention on this content.

1 Methodology

It is search-action research, that is, at the same time as seeking to explore a type of knowledge, also intervenes in the results. In addition, it aims to solve practical problems and has an interrogative critical character^[10].

1.1 Application of questionnaires

Pre-test questionnaires were applied in two 1st-year high school classes, a public school with 27 students and a private school with 34 students, without sexual restriction, ethnicity, class, social group, or state of health; the two rooms were selected by lot. The questionnaires presented 20 questions, being some dissertations, and others of multiple choice, in which more than one alternative could be indicated, characterizing it as a mixed-type questionnaire, with open and closed questions. The questionnaire was composed of two sections, one with questions of sociodemographic characteristics and the other with questions about STD. The questionnaire was answered individually. Before being applied to students, it was clarified that they were not required to answer it whole or any question and they could stop responding when they wanted to. On average the questionnaires were answered in 15 min. The results were passed to an excel worksheet, and the percentages of the answers for comparison between schools were calculated.

1.2 Application of the interview with the teachers

During an interval of classes, an interview was conducted with a biology teacher from each school within the classroom. Teacher responses were noted and then passed to a spreadsheet. The interview was composed of two sections, one with questions of sociodemographic characteristics and the other with

questions aimed at raising awareness about how the school and the teacher work on the topic of STDs with students.

1.4 Intervention

The intervention began with the application of a group dynamics with the students. Three groups were formed, and each group was given cards with the names of the main STDs and others with their respective symptoms. The students had to link the disease to their symptom. After 15 min, the answers were analyzed and used to explain the diseases in which the students were having difficulty knowing. After this dynamic, we started an expositive class on the subject, using slides.

In this presentation was explained, first, the reason for the project, clarifying the great occurrence of STD among young people. The followings were explained the main STDs, their symptoms, prevention, treatments, form of transmission, possibility of cure, and illustrating with photos of each disease. In the end, some existing myths about the subject were worked out in a dialogical way. Finally, it was discussed about the prevention of this type of disease and demonstrated the correct placement of the male condom, through illustrations. At the end of the intervention, the questionnaires (post-test) were applied again in the same way as the 1st time so that the results of the intervention could be verified.

2 Results and Discussion

According to the interview with the teachers, we obtained the following data: Both the teacher of the public school and the private school foresees this content in the program, and the content is addressed in the textbook. The difference is that the public school teacher reports that the content is predicted in the school's pedagogical project. Development is intimately related to the sociocultural context in which the person inserts and processes itself dynamically through ruptures and imbalances that provoke continual reorganizations on the part of the individual^[11]. There is a need to prepare these classes in a way specific to each class, taking into account the particularities of their students. Each class has different interests that vary with the experience of each one, with the age and the education coming from the family, and the didactic material facilitates this preparation, selecting the most suitable for the content of interest. In fact, the teaching material should contain this content; it is part of the

National Curriculum Parameters, in the transversal themes - as previously mentioned - that guarantee educators the instruments to deal with this topic with their students. While biology teachers are expected to work on this content, it should be remembered that the responsibility for sex education should be the school's overall responsibility^[6]. When teachers were asked about the students' interest in the subject, they replied that they were interested and used to question them (this was noted at the time of the intervention, by the attention observed in the students, and the amount of questions they asked).

The teachers also said that they work with all important aspects of STDs, such as types of diseases, ways of prevention, treatment, and forms of contagion. This theme is seen in the pedagogical materials such as sexual education guides, textbooks, textbooks, and cross-cutting themes sexual orientation (PCN). This is mainly related to contraceptive methods, anatomical and physiological knowledge of reproductive systems, and to the prevention of STDs. The issue is addressed as a problem of sexual and reproductive health, through medical, and biological discourses to prescribe care and thus control the body and sexuality.

The public school teacher reported using reading texts, figures and data show to convey the content. The private school teacher explained that to work on the subject with the students, he uses the methodology of seminars, in which one of the themes is the STDs, and at the end asks questions and complements the explanation from the doubts and curiosities that the students present. In assembling the seminars, students need to research and study the topic addressed, and this methodology often arouses their curiosity in some questions, which will later be healed in class by the teacher. Regarding the students, it was verified, that the previous knowledge of the students was satisfactory in the two schools; however, it is remarkable a greater knowledge of the students of the private school. Basic knowledge about STDs was satisfactory; virtually all students associated STDs with STDs, but about 80% of these students did not know that there were other forms of transmission. Regarding the knowledge of the existence of an STD, it is observed that the knowledge of the students of the public school is more precarious than those of the private school. In the public school, 78% of the students said that they knew some STDs, whereas, in particular, 100%. In the private school, it was also possible to perceive a greater diversity of knowledge

of diseases than in the public school, as can be seen in the chart below. Regarding the transmission of STIs, in the public school, 54% of the students said that they occur only through sexual contact and in the private school only 26% of the students pointed out this alternative. The percentage of students who responded that could occur through sexual and blood contact was very close between the two schools, around 95%. Many gave the two answers, showing a contradiction. This may have occurred because the first alternative of the questionnaire was just sexual intercourse, perhaps leading to a deduction. Another disparity between the two schools was noticed when students responded to other forms of transmission. No public school student made mention of this, while 14% of private school students specified direct contact with wounds of some STDs, with contaminated hospital objects, mucosa, and mother-to-child transmission during childbirth. With respect to the symptoms, a great difference between the knowledge of the two schools was observed. Graph 3 shows that the public school presented very unsatisfactory results since about 85% of the students did not respond or did not know any symptoms of STDs. The knowledge of the private school, although showing better results, is still not considered sufficient. It is important to highlight that the identification of a symptom is of extreme importance for faster and more efficient diagnosis of an STD because when undiagnosed it can bring irreparable damages to the life of the patients. Regarding prevention methods, again private school students demonstrated greater knowledge. The data show that the frequency of public school students who associate STDs directly with AIDS is higher in the public school; with regard to the cure of STIs, the majority (77%) do not believe that there is a cure. In fact, all STDs, except viral ones (AIDS, human papillomavirus [HPV], and herpes), have a cure if treated properly^[12]. About the knowledge of vaccines for treatment, only 7 students (20%) of the private school cited the vaccine for HPV, while in the public school room no student cited any vaccine. At present, the only existing vaccines for STDs are for Hepatitis B and HPV, which is based on the results obtained in the literature. Possibly as there are vaccines for few STDs, their knowledge about these is not enough. The Ministry of Health has recently incorporated the HPV vaccine into the Unified Health System (SUS) as early as the beginning of the 2014 school year for girls aged 10–13 years. The vaccine will protect girls against four

HPV variables, which account for 70% of cases of cervical cancer. This is the 1st time that the population will have free access to a vaccine that protects against cancer. Notes that 7 students cited the existence of such a vaccine, which confirms that this data was worked in the classroom, as told by the teacher, but as it was in the form of a seminar, probably only been assimilated by the Group of students, that is, this method may be effective for learning, but, in General, only those students who have studied and researched learn. The rest of the room may not pay attention at the time of the explanation or forget more quickly what was covered in the presentation. The seminar as a teaching technique is of great value in teaching new subjects or to deepen a more controversial subject, since it is an excellent technique to stimulate the production of knowledge. However, also notes that the success of this method will depend in part on the teacher and the student. With this research, we saw some misconceptions regarding this technique, as the extreme division of labor, the discontinuity and the absence of interaction. We see reports of students who say: "sometimes, students don't prepare right and the subject is more superficial". This shows the need for all the students in the room to study and be aware of the subject, to participate and become interested in the content that is being passed by the colleague. It is up to the teacher to conduct the seminar in the best way.

Regarding STD treatments, the responses of the two schools were similar: 72% in the private school and 70% in the public school answered that there is treatment, but few students mentioned the type of treatment. The students' source of knowledge was, first and foremost, the school. The teachers themselves reported in the interview that the students look for them to clear their doubts. This fact reinforces the importance of investing in adolescent sex education. In the public school, the second most cited source of information was the family, with 44%; already in private school, was the books and the internet, with 41%, and in the family appears as a response of 29% of the students. Tinsley evaluated the perspective of the family in the communication and observed that the communication between parents and children is positively related to the preventive behaviors of adolescents. These researchers also found that low-income families establish conversations about sexuality and HIV, which makes them more able to deal with their sexuality. In which the family was one of the last sources cited by the students, and also diverge from the

work, in which the conversation about sexuality with the children would still be a taboo in Brazilian culture.

The proportion of knowledge acquired through peers and mothers, in particular, is very close, suggesting that friends and parents (especially mothers) are important sources of this information. This reveals the importance of social relations in the acquisition of knowledge. In addition, family dialog about sexuality is, in fact, imperative, since the theme is complex and involves intimacy. This is one of the difficulties of schools, which do not address this issue openly, or in a more informal way. Usually, the opposite is done, the subject is treated in the form of lectures, which may inhibit students from asking related questions since this is still a little talked about subject. Peer presence may also inhibit teens from questioning teachers in public, which leads them to heal curiosities with parents or friends or as the biology teachers themselves have reported, to do so in a particular way.

In any case, the influence of the context of these students and their social conditions is very clear. In most favoured class, represented by the private school, there is access to more selective media, in a way, like internet and books; what no longer happens to the less favored class, that is, students who study in public schools, in which there is lack of access to these means, probably end up fostering relations with the family. As to what students would like to know about STDs, there was a big difference between schools. In the public school, it was noticed that 52% would not like to know anything or did not respond. The highest index of unanswered questions occurred in the public school.

This result may indicate their ignorance about the subject or disinterest. Found that the causes of students "lack of interest nowadays range from lack of lectures, authoritarian attitude or disregard of some teachers, lack of school structure, lack of encouragement, and parents" example, to the development of other activities such as the work. The fact that public school students present greater need to help with family expenses may interfere with this lack of interest.

On the other hand, the students of the less favored classes think the school different from the youngsters of, the more affluent classes, which reflects directly in the acquisition and valorization of knowledge and, above all, in their relationship with knowledge. On the other hand, students of lower classes think different school of youth of the wealthy classes, which reflects directly on the acquisition enhancement of knowledge

and, above all, on your relationship with the know. Nor could it be different, since the relationship with knowledge is a social relationship i s determined by the condition of your life and it reflects social relations that structure our society, even though they are natural. For example, 30 years i would not even think about talking about this subject in the Brazilian school. In the private school, the index of unanswered questions was 34%. Although we are tempted at first to think that this difference is due to the better structure of private schools, the reality is different. There is a great distance between schools, especially in relation to performance. However, private schools have shown signs of crisis, mainly verified in 2005 through Saeb data, in the more developed regions of Brazil and Mathematics. It also appears that both schools have practically the same difficulties, because they belong to the same educational system. This result is attributed mainly to instructionand reproducibility. This result may also be related to the fact that the school, whether private or public, does not invest in student and teacher learning, but in classes and tests. The private school, in fact, falls short of the expected, regardless of the fame it carries.

It may also be that the research has rightly measured this reproductive knowledge, hence, this favorable difference of the private school. In addition, we have the investment of private schools in the college entrance examination, which reflects negatively on contents that aim at the well-being and health of the student and society above all else.

In any case, the investment in the public school is fundamental, since the majority of the students is in the public network of education. According to MEC data, in 2010, the state network received 85.9% of the students and the private network 11.8%. According to INEP, in the census carried out in 2012, the state network continues to be the main responsible for the offer of high school and has 85% of enrollments, federal and municipal networks have just over 2%, while the private network has 12.7% of enrollments^[13].

A study on the knowledge of contraceptive methods among public school and private school students in the city of São Paulo revealed that both had little knowledge about it, although it was pointed out that socioeconomic and cultural differences may influence this type of knowledge. A little more knowledge has also been shown in adolescents in private schools, such as the number of contraceptive methods. Thus, although students of a higher socioeconomic level have better

quality information, they are still not sufficient. In the research on the level of knowledge about the perception of HIV risk between 1998 and 2005, socioeconomic level and level of schooling made a difference^[8]. However, the research draws attention to the fact that among young people between 16 and 24 years old there was no increase in knowledge about it. These results, once again, reinforce our work aimed at transmitting information about the subject and generating knowledge among young people^[14].

2.1 The intervention

At the time of the intervention, students from both schools were generally very interested in the subject, most of them interacted and questioned. During the presentations, it was observed that the images had more impact for the students: When some photographs appeared, the adolescents became very agitated and surprised and began to make comments with each other, causing a bit of disorder, which is normal at this stage. In addition, interaction is part of learning. After the intervention, there was an increase of approximately 6% in the number of complete and correct answers (based on the post-test) of the question “what is an STD” in both schools. In the private school, all the students answered this question, already in the public school, there was a 5% increase in the number of students who did not respond. Perhaps this can be explained by the lack of interest shown by some students at the time of application of the questionnaire. As for the knowledge of some STDs, there was a 17% increase in the number of public school students who answered that they knew of any disease. However, in both schools, the students showed a greater diversity of diseases after the intervention. Regarding the mode of transmission, it was possible to perceive great use by the students of the public school, with 35% of the correct answers, that is, by sexual and blood contact. Regarding the percentage of students who did not respond to this question earlier, there was a 44% increase in the number of students who responded after the intervention, which is positive, as this demonstrates that there was learning and there was more interest, possibly. As for the symptoms of STDs, there was an increase of about 65% in the number of public school students who said they knew some symptom, whereas in private school all the students knew. Knowledge about prevention methods increased by about 12% in the public school and 6% in the private school. On the existence of vaccines, in the public

school, with a 28% increase, most students answered that some STDs have vaccine. In the private school, 100% of the students answered that there are vaccines for some STDs. In public school, most students still believe that STDs have no cure, unlike the private^[15]. Regarding treatment, there was an increase in the two schools of students who believe that there is treatment. An alternative to intervention in public and private schools would be for schools to set aside a period of their school calendar for enlightenment activities on the dangers that sex practiced without protection can bring, showing students that sexually transmitted diseases are the most varied possible; however, in the great majority, they have treatment and, mainly, means of being avoided^[16].

2.2 Final considerations

With regard to the comparison of knowledge between the public and private schools, we consider that the previous knowledge of the students of the private school was more comprehensive than the students of the public school. It was possible to notice this difference in the contents on STD examples, modes of transmission, symptoms, and methods of prevention and cure. This difference occurred due to several factors, among them, the most important, which are the living conditions of each segment, influencing the access to knowledge, and the interest of the students^[15]. It is important to emphasize that even though the content is predicted in both schools - as the teachers said - it is natural that the effect, the methodology, the relationships, and the worldview determine the differences in learning. The same can be considered as to the meaning that this type of knowledge makes to one and the other school^[17].

It was possible to perceive that knowledge about STDs, regardless of whether it is in the public or private school, is superficial and incipient, possibly because this theme is not further elaborated in schools. This is worrying because it is certain that at this stage of adolescence they are initiating their sex life and knowledge is one of the ways to prevent STDs^[18].

Regarding the intervention, it was demonstrated that it acted positively for the acquisition of the students' knowledge, expanding, and bringing more contribution to the public school. One of the factors is the methodology used and the fact that we are a new element in the school. It is believed that when this theme is worked in a different way, that is, through a group dynamics or a conversation not as formal

as a lesson, students devote more of their attention, absorbing more content, and thus expand their knowledge.

From these data, it can be assumed that the intervention was valid, and there was a satisfactory increase in the number of correct responses in relation to the pre-test. Research data show that, in general, most students came to know methods for avoiding these diseases, as well as showing an increase in the number of diseases known to them. This shows that the intervention aroused curiosity in students about the STD issue and was able to remedy the doubts of many of those involved in the intervention^[19].

Although the contribution was punctual, it can be absorbed by the school and can be used by teachers. It is also important that the school has this notion about the gaps in student knowledge and the importance of investing in their sex education. In addition, this experience was very important as a university training, since it allowed students to have more direct contact with the reality of the students and the school institution and could even have contact with both the private and public levels^[20]. Therefore, it is also recommended that this type of experience continue to occur with future educators, that is, in the degree programs, mainly because it contemplates not only the study of theory but also the modification of reality.

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