

10-1-2010

Bridging the Gap: Identifying Social Factors That Affect the Knowledge of Sexually Transmitted Infections and Use of Prevention Methods in Young Women

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Acknowledgements / Reconhecimentos

First and foremost, I would like to thank my advisor, Oade Oliveira C. Souza. My first research experience would not have been nearly as successful or enjoyable without your enthusiasm and support. Thank you for keeping me on track, but also giving me the independence to explore my own skills as a qualitative researcher.

An additional thank you goes to Oade and all of the individuals who work with the Coordenação de DST/AIDS and CTA/SAE Viva Vida. Thank you for welcoming me into your workplace with warmth and interest. Your passion for your work is inspiring and everything that I have learned and experienced with you is invaluable.

A special thank you goes to Damiana de Miranda. Without your organization, encouragement, and passion, I would never have been able to accomplish all that I have during this semester. Thank you also to all of the SIT personnel who have played an integral role in my experience in this country, both in person and behind the scenes.

Thank you to all the participants of this research. Your openness and willingness to participate has contributed immensely to my experience, and potentially to improving health services in your community. An additional thank you goes to Creuda Doroteo de Souza, the *diretora* at the Colegio Estadual Francisco da Conceição Menezes, for giving me permission to work with her students.

A special thank you goes to my family, which is now international. Thank you, American family, for your constant and unwavering love and support. Thank you, Salvador family for welcoming me into your home, your lives, and your family. Thank you, Santo Antônio de Jesus family, for your unyielding generosity, especially in times of great need. You have taught me invaluable lessons about the incredible power of kindness and love, which will stay with me for the rest of my life.

And of course, an *obrigação* goes to my amazing American colleagues. Thank you for sharing with me all of your incredible diversity and character. I have learned so much from each one of you and am incredibly grateful for all we have experienced together.

Abstract

This study investigates the social factors that affect the transmission of sexually transmitted diseases (STIs) in young women, focusing on their knowledge of the subject and use of prevention methods in order to discover why STIs, though preventable, are still prevalent in the lives of young adults, and more often, young women. Sixty-one anonymous, closed questionnaires were distributed to female students of at least eighteen years at the Colegio Estadual Francisco da Conceição Menezes in Santo Antônio de Jesus, Bahia, Brazil, and six structured interviews were conducted with students from the same pool. Results showed varying levels of knowledge, educational experiences, and use of resources for information about STIs among the students. While personal practices of prevention methods differed between the young women, their perception of their peers' use of prevention methods was similar, although inaccurate when considering the quantitative data. All students know where to get condoms for free, although the actual use and non-use of condoms had a significant male-influence. Recommendations made by the researcher looked to facilitate the relationship between student and family as a resource for sexual health information, to create long-term sexual health educative classes for young women run by the health posts, and to open up the dialog between health professionals and men with men's health campaigns and male-targeted health care. Additionally, this research calls for a similar study to be done with the population of young men to determine the factors that affect their decisions to use or not use condoms in their sexual activity, in order to holistically analyze the social influence on the sexual health and safe-sex practices of young-adults.

Resumo

A pesquisa investiga os fatores sociais que afetam a transmissão das doenças sexualmente transmissíveis (DST) nas mulheres jovens, focando-se no conhecimento delas sobre o assunto e o uso dos métodos de prevenção para descobrir por que as DSTs evitáveis ainda são comuns nas vidas das jovens, e com mais frequência, mulheres jovens. Sessenta e um questionários fechados e anônimos estavam distribuídos às estudantes femininas com pelo menos dezoito anos no Colégio Estadual Francisco da Conceição Menezes em Santo Antônio de Jesus, Bahia, Brasil, e seis entrevistas estruturadas estavam feitas com as estudantes do mesmo grupo. Os resultados mostraram níveis variados do conhecimento, experiências educativas, e o uso das fontes para informação sobre DST das estudantes. As práticas pessoais dos métodos de prevenção entre as mulheres jovens eram variadas; mas, a percepção delas sobre o uso da camisinha das pessoas da mesma idade era similar, embora imprecisa. Todas as estudantes sabem onde podem pegar camisinhas de graça; porém, o uso e não uso das camisinhas tinham uma influência grande dos pensamentos masculinos. As recomendações feitas por pesquisador são facilitar a relação entre a estudante e família como uma fonte importante da informação sobre saúde sexual, criar aulas sobre saúde sexual para as mulheres jovens por os profissionais nos postos de saúde, e abrir a discussão entre os profissionais de saúde e os homens com campanhas de saúde de homens. Ademais, esta pesquisa convoca para um outro estudo da população dos homens jovens para determinar os fatores que afetam as decisões deles para usar ou não camisinhas nas atividades sexuais deles para analisar e entender a influência na saúde sexual e práticas de sexo seguro dos jovens.

Introduction to Subject / Introdução do Assunto

“Any man who has a bodily discharge is unclean...whether the discharge continues or stops. Any bed on which the man with the discharge lies and anything on which he sits will be unclean. If you touch the man’s bed, you must wash your clothes and bathe yourself in water.”

-Leviticus 15: 2-5

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## **What are Sexually Transmitted Infections?**

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Sexually Transmitted Infections (STIs) are bacterial, viral, and parasitic infections that are spread through sexual contact with infected partners (WHO, 2007). They have been integrated with human life since before health technology, and are currently one of the most common public health problems in the world. In Brazil alone, it is estimated that 4.5 million sexually-active individuals are currently infected with curable STIs (Departamento de DST, Aids, e Hepatites Virais, 2010). STIs are an important public health concern because if left untreated, STIs can lead to serious complications, specifically in women, such as chronic pelvic inflammatory disease, ectopic pregnancy, and infertility (WHO 2007, CDC 2010), which are both damaging to the individual and an economic burden on the health system. The STI burden can be described like a glacier, with the small tip above the water representing the number of treated STIs, and the mass beneath the surface of the ocean representing the true, invisible burden of STIs in society (Passos, 8 November 2010). The asymptomatic tendency of some STIs delays discovery of infection, increasing the risk of complications and the probability that the infected person will unknowingly spread the disease to his or her sexual partner/s.

There are more than 30 different sexually transmissible bacteria, viruses, and parasites (WHO 2007). Common bacterial infections include gonorrhea, Chlamydia, and syphilis.

Common viral infections include HIV, genital herpes, genital warts, and hepatitis B. Parasitic organisms are responsible for vaginal trichomoniasis and Candida in women. (WHO 2007, CDC 2010). Symptoms of STIs vary with the type of infection; however, common signs of STI infection include urethral discharge, abnormal vaginal discharge, genital ulcers/chancres, burning sensation when urinating, lower abdominal pain, or as is common with Chlamydia and gonorrhea, no symptoms at all. (WHO 2007, CDC 2010).

### STIs and Prevention

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STIs are principally spread through person-to-person sexual contact. In the case of HIV and syphilis, the infection can also be spread through vertical transmission from mother to child during pregnancy and childbirth. Additionally, STI infection is considered the primary factor that facilitates the transmission of HIV (Passos, 8 November 2010). The most effective way to avoid becoming infected with an STI is to abstain from sexual behavior (WHO 2007). However, in a sexually active relationship, the “*único método de prevenção*” (the primary prevention method) of STI transmission is using a condom in all sexual behavior (Passos, 8 November 2010). Being sexually active within a “long-term, mutually monogamous relationship with an uninfected partner” is also an effective prevention method as long as the sexual relationship is truly mutual (WHO 2007).

### STIs and Education

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The lack of knowledge of STI transmission and prevention is an important factor concerning STI control in the adolescent and young adult population. Andrade et al. (2009) found that the implementation of sex education in Brazilian schools showed significant positive changes in sexual behavior, including doubling the consistent use of condoms in casual partners, and a 68% increase of the use of modern contraceptives at last intercourse. They cite the

“widely recognized” notion that the main mechanism for preventing risky sexual behavior in adolescents is education prior to sexual debut, although also noting that this has yet to translate into policies. Another research study on sex education in Brazilian schools also demonstrates the positive impact of education on safe sex practice, showing statistically significant increases in knowledge of anatomy and STIs and almost doubling the use of contraceptive methods (Díaz, 2005). These studies demonstrate that education can be an important social factor in STI control, and can facilitate the eradication of STIs for all risk groups, including young women.

### *STIs and Health Services*

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The asymptomatic tendency of common STIs limits detection until the occurrence of severe complications. The lack of routine screening and access to health services contribute to high rates of STIs in all populations, including young adults. Oliveira et al. (2007) studied genital infections in rural women with little access to health services and discovered that 45% of the sexually active women in the community had a genital infection, with the burden of Human Papillomavirus (HPV), Chlamydia, and Gonorrhea falling heavily on the young women between the ages of 13-19. The lack of access to or utilization of health services with high STI prevalence was also reported in Codes et. al.’s study (2006), which found that women recruited from an area with low access to health services had higher rates of STI infection than those who attended a health clinic regularly. Screening and detection of STIs is an important factor in STI control, yet the services are not being adequately utilized by some populations. Identifying the reasons why this truth exists will provide useful information in improving access and use of health services for STI screening and control.

However, it is clear that access to education and health services are not sufficient in prevention of STIs. There exists a gap between education and practice, which is apparent in Doreto and Vieira's findings (2007), indicating that while 93.3% of the participants cited systematic condom use as the principle way to avoid STI transmission, only 35.2% of the participants use a condom during every sexual intercourse. With this data, they still find that 65.5% of the sexually active female participants did not consider themselves at risk for STIs, and only 63.3% had ever visited a gynecologist. The gap between knowledge and the use of prevention methods and sexual health practices is the foundation of this study, which hopes to identify the social factors that craft this gap in order to find ways to close it.

### ***Introduction to Study / Introdução da Pesquisa***

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*“The inequalities and outcomes I describe are, by and large,  
biological reflections of social fault lines.”*

*–Paul Farmer, Infections and Inequalities (5)*

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In Brazil, STIs are on the rise in the adolescent and young adult populations (Codes, 2006; Doreto and Vieira, 2007). Several sources support that the highest rates of infection occur in sexually active adolescents and young adults due to the greater susceptibility to infection of the developing female body (Codes, 2006; Doreto and Vieira, 2007; CDC, 2010). However, while young women are more biologically vulnerable to STI transmission, the use of prevention methods is a social practice that antecedes both transmission and infection.

A number of social factors affect the transmission of STIs in young-adult females, such as education, health access, and gender inequalities; however, there has not been significant

qualitative research done in this area. Although various quantitative studies (Andrade et al., 2009; Codes et. al., 2006; Díaz, 2005; Oliveira et al., 2007), have commented on the effect of education and access to health services on STI education and infection, the information is presented in a mathematical manner and avoids addressing the underlying social foundations of the statistics. For example, Calazans et. al (2005: S44) find that “being a woman” is a statistically significant risk factor associated with a lack of condom use; however, there was no further investigation to determine the qualitative significance of this statistic. Only Doreto and Vieira (2007) and Szwarcwald et. al. (2005: S57) use their quantitative results to cite social risk factors for STI infection, discussing lack of access to information for adolescent females and the imbalance of power in decision-making for women in Brazil.

Understanding the biology of the developing female body is an important factor in understanding the *biological* risk of STI transmission in young adults; however, it does not provide information on the individual’s knowledge about STIs and his or her use of prevention methods. With data on the social determinants of STI transmission as they relate to knowledge and active use of prevention methods in young women, there will exist a better understanding of the *social* factors that precede STI transmission, providing a more relevant foundation for prevention campaigns for this affected population.

This study focuses on identifying the social determinants of STI transmission, knowledge, and prevention in young adult females in order to discover why STIs, though preventable, are still prevalent in the lives of young adults, and more often, young women. The objectives of this study are to examine the resources available for STI information for young women, to investigate the social factors that affect their access to this information, to explore their use of prevention methods, and to relate this information to the existing STI burden in the

community. Additionally, a secondary objective of this study is to educate the participants and moreover, use the results of the research to propose educative strategies for STI prevention in young women targets the factors that affect their knowledge about STIs and their decisions to use prevention methods in their sexual practices.

Definition of Terms / Definição dos Termos

- **Sexually Transmitted Infection (STI)** – bacterial, viral, and parasitic infections that are spread through sexual contact with infected partners. The term, sexually transmitted disease, is of equal significance and appears in many of the articles. I prefer the use of “infection” over “disease” because disease has the connotation of active illness with noticeable symptoms, while many STIs are asymptomatic. I therefore use the term STI to stress the asymptomatic nature of the infection. *Português: Doença Sexualmente Transmissível (DST)*
 - **Human Immunodeficiency Virus (HIV)** – the virus that is responsible for AIDS. HIV is most highly concentrated in blood, semen, and vaginal fluids, and is principally passed through unprotected sexual intercourse, among other risk behaviors.
- **Oral contraception** – hormonal method used to prevent conception during vaginal intercourse.
- **Prevention Methods** – practices that are used to reduce risk of STI transmission, including, but not limited to, using a condom during sexual behavior, maintaining a low number of sexual partners, and knowing the STI status of one’s sexual partner.
- **Risk behavior** – personal acts that increase the risk of STI infection, including, but not limited to, not using a condom during sexual behavior, alcohol use during sexual behavior, and having multiple partners.

- **Risk group** – over-arching traits that make an individual more susceptible to STI infection, including, but not limited to, age, gender, race, and socioeconomic status.
- **Sexual behavior and sexual practices** – sexual acts that include oral, vaginal, and anal sex.
- **Sexual intercourse** – vaginal sex.
- **Sistema Único de Saúde (SUS)** – the federal-run universal health system in Brazil.
- **Young women** – females between the ages of 18-22.

Methodology / Metodologia

Study Area

The study was conducted in the municipality of Santo Antônio de Jesus, situated 187km inland from Salvador, Bahia, in the Northeast region of Brazil. After a period of rapid urban development, Santo Antônio de Jesus is today a small city with a large rural component. The city's population is 88,771 inhabitants spread over 260km² of land. (Couto, 27 October 2010). Health professionals from Santo Antônio de Jesus describe the general population as middle class; however, it is important to note that the middle-class of the Recôncovo, in the poorest region of the country, is more similar to the country's lower or lower-middle class.

Significance of Study Area

Over the past few years, the city has developed an extensive SUS health system that serves as a model for its rural neighbors. Today, Santo Antônio de Jesus has 19 *Unidades de Saúde da Família* (SUS public health posts), 12 satellite posts for individuals living far from the main health posts, and a number of *serviços de referência* (reference centers) that serve the city as well as its surrounding rural municipalities. Over the past six years, the health system has grown from reaching only 33.5% of the community in 2004 to 83.9% in 2009 (Couto, 27 October 2010).

Part of the municipality's public health system is a *serviço de referência* called the *Centro de Testagem e Aconselhamento / Serviço Atendimento Especializado – Viva Vida* (CTA/SAE Viva Vida), which is a SUS health post that specializes in testing and counseling individuals who have been affected by HIV/AIDS/Hepatitis B/Hepatitis C. Serving Santo Antônio de Jesus and 19 of the neighboring municipalities, the program aims to:

Prestar atenção integral à saúde da população através de medidas de promoção, prevenção, diagnóstico, e assistência das DST/HIV/AIDS. (Souza, 27 Outubro 2010).

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*To give full attention to the population's health through promotion, prevention, diagnostics, and assistance of STD/HIV/AIDS. (Souza, 27 October 2010).*

Through frequent, comprehensive, and creative campaigns, the CTA/SAE Viva Vida is the leading figure in the promotion and education about STIs/HIV/AIDS in the community. Because of its influence on the knowledge and awareness of the community members to subjects relating to STIs and prevention methods, the CTA/SAE Viva Vida is both an important resource and audience of this study.

### Study Population

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Female students at *Colegio Estadual Francisco da Conceição Menezes* in Santo Antônio de Jesus aged 18 or above were invited to participate in the study, although only students aged 18-22 were eligible to participate. Students from both the morning and afternoon session were visited, presented the study, and invited to participate. The *diretora* (principal) of the school did not have data on the number of female students aged 18 or above, therefore the number of actual participants could not be related to the number of eligible participants quantitatively.

## *Study Design*

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The main study was designed in two parts: a structured questionnaire [Appendix A] and a structured interview [Appendix C]. The objective of the questionnaire was to quantitatively identify the demographics and common STI risk factors of the target population as they relate to STI knowledge and condom use. The target sample size was between 50-100 students.

The interviews explored the subject's knowledge about STIs, her opinions on the sexual health of her population, and her sexual health practices, if sexually active. The goal of this part of the study was to qualitatively analyze the relationship between the quality of the subject's knowledge about STIs and her use of prevention methods in her sexual activities, if applicable, in order to identify the factors that affect a young woman's decision to use prevention methods in her sexual practices. The interview is also an opportunity to explore the subject's perception of the knowledge and sexual practices of her population in comparison with her own. The target range of interview participants was 5-15; however, this number was dependent on student interest and willingness to participate.

### **Part I: The Questionnaire and Interview Invitation**

Since there is no existing hard data on the demographics, STI risk factors, and frequency of condom use in the young-adult female community, the first part of this research was a 31-question questionnaire to identify the existing patterns of sexual practices, condom use, and STI knowledge of female students between the ages of 18-22 at the *Colegio Estadual Francisco da Conceição Menezes* in Santo Antônio de Jesus.

After receiving authorization from the *Diretora*, I was brought around to each classroom that was thought to have individuals of at least 18 years, introduced, and then allowed to explain my research. If there were students ages 18 or older that chose to participate, the questionnaire

was passed out to all eligible students, and explained each part. The participants were asked if they had questions, and then the interview invitation was handed out. The students were assured that their name would not be associated with the questionnaire in any way. We gave the students an average of 20-30 minutes to complete the surveys.

The questionnaire, titled “*A Saúde Sexual das Mulheres Jovens*” (The Sexual Health of Young Women), was composed of five parts. The purpose of the first part was to identify the demographic characteristics of the community, including age, race, a socioeconomic indicator, and marital status, among other demographic data. The socioeconomic indicator was a list of household items, and the participant was asked to mark all of the items that she has in her house. This will be the basis of a basic socioeconomic comparison. With agree/disagree statements, the second part aimed to evaluate the subject’s knowledge about STIs and related resources. The third and fourth sections explored the sexual practices of the student, if applicable, including age of sexual initiation, number of partners in the past year, number of partners of her last partner, and the frequency of condom use in various sexual activities. The final section evaluated additional information on condom use and STI resources with agree/disagree statements, including questions about condom use during her first/last sexual intercourse, if she has had an exam to check for STIs, if she feels comfortable discussing sexual health with family and friends, and a multiple-choice list of her main sources of information about STIs.

On an additional, half-sheet of paper that was turned in separately from the questionnaire was an invitation to participate in the interview portion of the study [Appendix B]. The student was asked to mark whether she would like, or not like, to participate in the interview portion. If she chose to participate in the interview, she was asked to write down her name, phone number, email address, class time (morning/afternoon), and availability (before school/after school). The

individuals that chose to participate were then contacted by telephone to make an appointment for the interview.

## **Part II: The Interview**

Originally, the interviews were intended to be held at the *Colegio Estadual Francisco da Conceição Menezes* thirty minutes before classes started, or for thirty minutes after classes ended, designed for both morning and afternoon sessions. The participants were called for a second time the night before their interview as a reminder of the appointment the following day. Two of the ten appointments were realized as proposed, while the others did not occur for a number of reasons, including illness, altered class hours, and forgetfulness.

Since making appointments with interested participants was not as successful as anticipated, the methodology was altered. Students from the *Colegio*, recognized by their uniform, were interviewed in the streets near the school after classes ended. The majority of the students asked to participate in this fashion were students waiting to take the bus, which does not leave until 12:00PM for the morning session and 5:15PM for the afternoon session. Since the classes generally ended about forty-five minutes to an hour before scheduled, there was ample time to conduct complete interviews with these participants.

All interview subjects were eighteen years old or older, and were read and asked to sign the *Termo de Consentimento* (Consent Form) [Appendix F] before participation. The participants were explained the subject of the research, and were assured that the interview was completely voluntary, their names would not be associated with the written report, and that they could ask questions at any point during the interview. For a list of interviews, please refer to Appendix E.

The interview was structured and was composed of four parts. The first part of the interview asked basic information: the participant's age, her marital status, and whether or not

she is sexually active. The second section of the interview was a quiz, designed to evaluate the participant's knowledge about STIs. She was asked to name her main resources of information about STIs, to define what an STI is, to name STIs that she knows, to describe how an individual can receive an STI, to describe how an individual can prevent the transmission of STIs, to define what "safe sex" means for her, and to evaluate her knowledge about STIs. The third section inquired about her comfort level discussing sexual subjects with friends, family, and partners, the sexual practices and frequency of condom use of her peers, and her thoughts about differences in knowledge and preference of condom use between men and women. The final section, if applicable, explored the participant's sexual practices, use of condoms, and knowledge of available resources for sexual health in the public sector.

The interviews took an average of 35 minutes. At the end of the interview, the participants were asked if they had anything to add, and again if they had any questions. All participants were given and read an informational pamphlet about STIs [Appendix G] that describes what an STI is, the common signs of infection, the consequences if left untreated, how to prevent transmission, where to get free condoms, and what to do if she suspects she has an STI.

### **Part III: Other Interviews**

Short, semi-structured interviews were conducted with health professionals at the *Unidades de Saúde* in Santo Antônio de Jesus [Appendix D]. These interviews included questions about the most common reasons for someone to get examined for an STI, how many condoms are distributed per week/month, and who is receiving the condoms. Other topics included the existence of *palestras* (lectures) for adolescents and young adults, the sexual health of this age group, and their reactions to subjects about sexual health.

### *Study Time*

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The research study was conducted during the month of November in the year 2010. The interviews with health professionals were conducted in the first week of November. The questionnaires were distributed between the November tenth and November sixteenth. The student interviews were conducted from November nineteenth to November twenty-sixth. A final presentation of the research was given to SUS health professionals in Santo Antônio de Jesus on the third of December.

### *Ethical Considerations*

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All student participants were eighteen years-old or older and after being told that participation was completely voluntary, were asked to participate. To ensure anonymity of the questionnaires, they were turned in separate from the sheet with contact information. The contact information had been seen only by the eyes of the researcher and has since been destroyed. The interview participants were read the *Termo de Consentimento*, asked if they had any questions about what the consent form meant, and were asked to sign the bottom. All participants were given the opportunity to ask questions before, during, and after the interview. All names of the participants have been altered to ensure confidentiality.

## **Results / Resultados**

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### **Part I: Questionnaire**

Sixty-one completed questionnaires were eligible for analysis: thirty-eight from sexually active students and twenty-three from students who are not sexually active. Questionnaires were not used if the age was not filled out, or if the age was out of the range 18-22.

### **Demographics**

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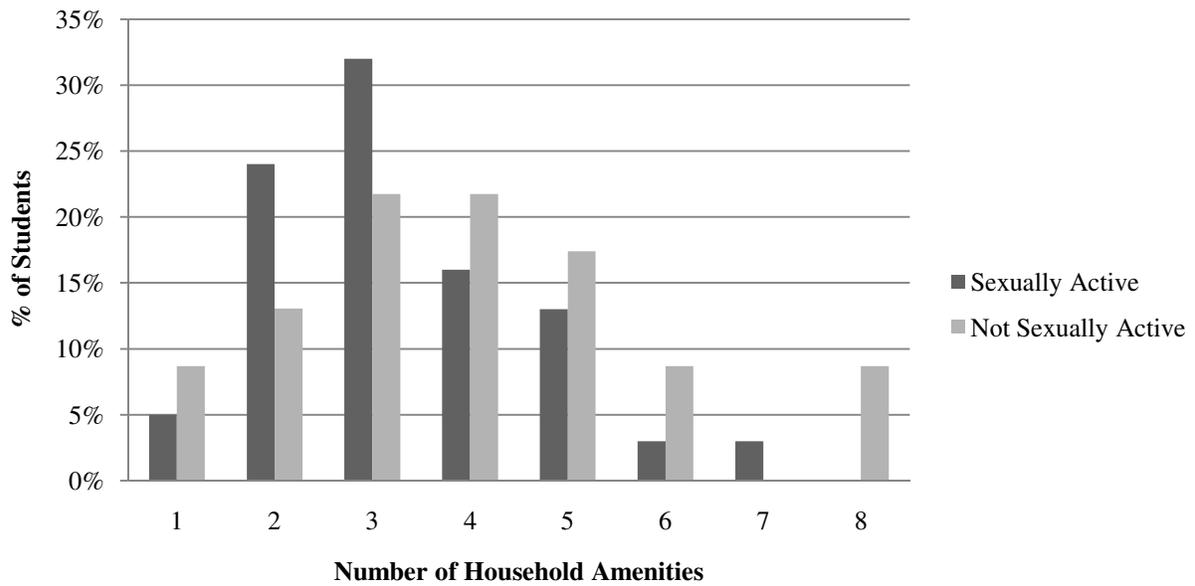
The average age of the students who completed the questionnaire was 18.8 years-old. The average number of household amenities marked as part of the socioeconomic indicator was 3.5/8. However, when separated, the distribution of the sexually active students was more skewed right with a lower average of 3.24/8 items, as compared to the non-sexually active group, which was a more normal curve and had an average of 3.96/8 items. [Graph 1]. The average age of sexual initiation was 16.5 years. Although the largest percentage (26%) of the students began having sex at age eighteen, 66% of the students became sexually active before the age of eighteen. [Graph 2].

### **Sexual Practices**

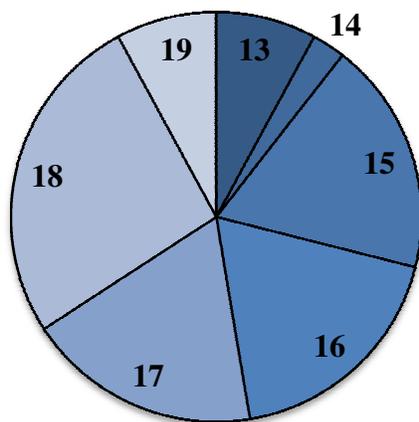
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In this study, being at risk is defined as (1) not using a condom during every vaginal and/or oral sexual relation, and/or (2) having the first or last sexual intercourse without a condom *and* never being tested for an STI. Of the sexually active students, only two (5.3%) considered themselves at risk of getting an STI. Nevertheless, 73.7% of the students were assessed as being at risk. Seven students (18.4%) did not use a condom during their first sexual intercourse, and nineteen (50%) did not use a condom using their last sexual intercourse. Six of the seven students from the first group are also part of the latter group.

Graph 1: Number of household amenities, separated by sexual activity, by percent (%)  
*Números dos indicadores da posição socioeconômica, separados por atividade sexual, por percentagem (%)*



Graph 2: Age distribution of sexual initiation, by percent (%)  
*Início da Atividade Sexual, por percentual de faixa etária, entre jovens de 18 a 22 anos*



## *Knowledge and Resources*

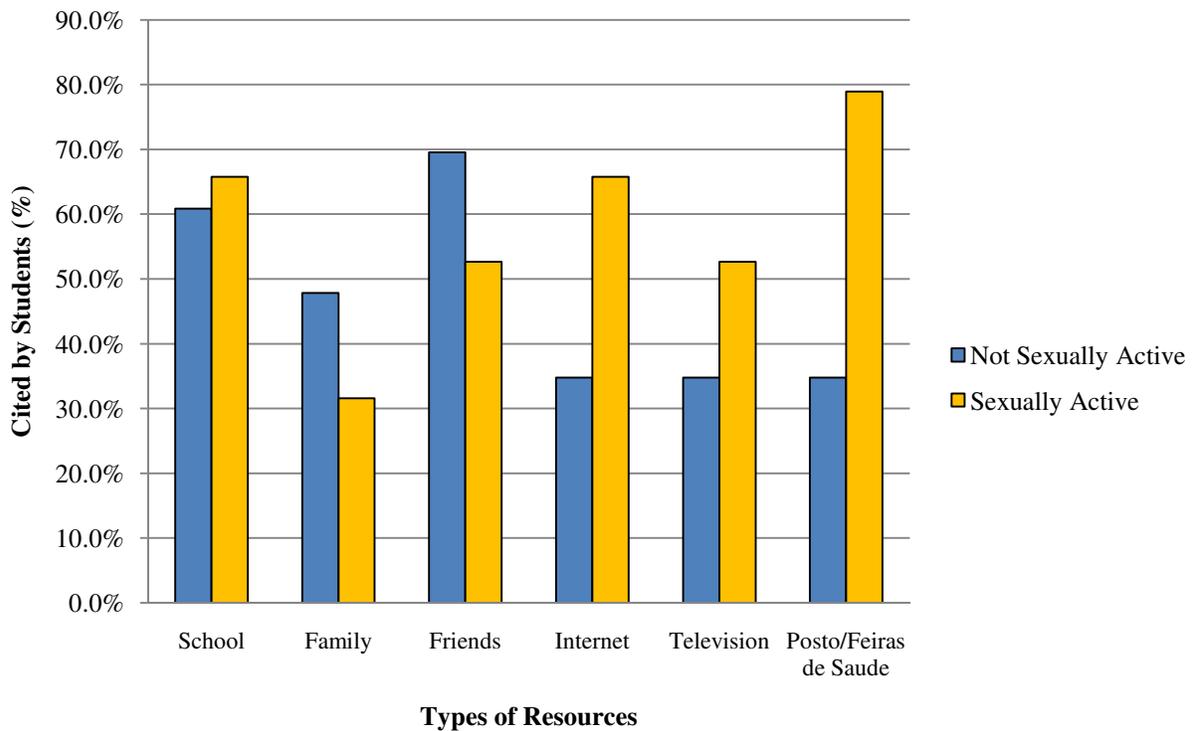
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With all students included, 91.6% marked that they have learned about STIs, and 80.3% marked that they know the symptoms of STIs. 98.3% of the students marked that they know how to prevent the transmission of STIs, and 86.7% know where they can be tested for an STI. All students (100%) marked that they know where they can obtain free condoms.

Only 34.4% of the students feel comfortable talking with their families about sexual health. Even less, only eight (21%) of the sexually active students feel comfortable talking about these subjects with their families. 78.3% of the students feel comfortable talking about sexual health with their friends, and 18.3% of the students do not feel comfortable talking with either group.

All students marked at least one resource of information about STIs, with an average of 3.32 resources reported per student. The sexually active students had an overall higher average of resources (3.53 resources) when compared to the non-sexually active students (3 resources). Both groups of students, sexually active and not, marked school at a similar rate, while the distribution of other resources differed. [Graph 3]. The non-sexually active students' main sources of information about STIs outside of school were from family and friends, while the sexually active students referred more to the internet, television, and postos/feiras de saúde for information. Almost 80% of the sexually active students reported the postos/feiras de saúde as important sources of information about STIs.

Graph 3: Resources for STI Information  
*Fontes da Informação sobre DST*



## Part II: Interviews

Six interviews were conducted with students: two from appointments and four in the street while the students were waiting for the busses to depart. Out of the 64 students that filled out questionnaires (three questionnaires were not used), 17 showed interest in participating in the interview. Of these 17 students, ten were able to make an appointment to meet. Of these ten students, only two attended the scheduled interviews. When students were approached after school and asked to participate, the vast majority did not wish to participate. Students immediately shied away when the word *sexualmente* (sexually – from *doenças sexualmente transmissíveis*) was spoken, which is indicative of the popular attitude surrounding the subject: embarrassment and silence.

Of the six interviewees, three of the students were sexually active, and three were not. While there was variation in STI knowledge, education, and condom usage reported by the students, there were apparent similarities in the students' thoughts about the sexual practices and the use of condoms among their peers.

Additionally, two interviews were conducted with medical professionals: Juçara Bomfim, a nurse technician at Programa de Saúde da Família (PSF) Amparo, and Carolina Arrigoni Lopes Noronha, the nurse and coordinator at Unidade de Saúde São Francisco.

### *Vignettes*

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Simone\* is 20 years old, in a relationship, and sexually active. She believes that she has a good understanding of STIs, and spoke very confidently during the quiz. She knows STIs are passed when you do not know anything about them and when you do not try to prevent transmission with the use of condoms. She identified AIDS, syphilis, and gonorrhea as STIs, and cited that her knowledge of STIs comes from the internet, postos de saúde, palestras, and friends. She knows where to get condoms for free, and where to see a gynecologist, which she does every six months.

She feels comfortable talking about subjects related to sexual health because she believes that they are important to discuss. She speaks with her friends about many things related to sex, including using condoms and taking care of one's own sexual health. Simone speaks with her family about subjects related to sex, but only "coisas básicas," basic information about sexual health. She notes that she also speaks with her partners about subjects relating to sexual health and condom use because she believes one must discuss these topics with a potential partner.

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\*All names of interview participants have been changed to ensure anonymity.

Simone notes that she always uses a condom during vaginal sex. She uses condoms to prevent both pregnancy and STIs. Her main reason is that she can only trust herself and know her own history. She cannot trust anyone else with her health.

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Daniella* is 20 years old, single, and sexually active. She considers her knowledge about STIs mediocre, saying that she does not know a lot, but she knows some things. This was demonstrated in the knowledge quiz, where she was able to list a risk factor for STIs and a symptom of syphilis to define STIs. She listed syphilis and AIDS as STIs that she knows. She knows how STIs are passed between people and also how to prevent STI transmission. Her definition of safe sex is not having many partners, having only one partner, and always using a condom. She knows where to get free condoms, and where to get tested for STIs.

Daniella started learning about STIs when she was seventeen or eighteen, through school palestras and information at health posts. She feels comfortable talking about sexual subjects with her friends, and talks with them about always using condoms. She does not talk with her family about sex or anything related to sexual health. Daniella talks with her partners about always using a condom and with whom they have already been. In her experience, the men talk freely with her about these subjects.

Although single, Daniella is currently seeing one man. She knows that he sleeps with other women, and she only sees him when he is in the area. She always uses a condom with him because she does not know if he uses condoms with his other partners. One time, she did not use a condom with him, and sought out a health post to see the gynecologist and get tested for common STIs. This is without her family's knowledge. She told her partner about her negative

test results, because it is important for him and his other partners to know this. Her partner has not been tested, but she supposes that he does not have an STI.

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Mariana\* is 19 years old and is sexually active with her current boyfriend. She rates her knowledge about STIs as fair, noting that most people her age do not know much about this subject. She learned about STIs through the television starting at age 17 and could only tell me that STIs can take a person's life when I asked her to define what an STI is. She could not remember the names of any STIs, although she knows that STIs are passed through sex without a condom. When I asked her about methods of preventing the transmission of STIs, she cited the pill (oral contraception) and using a condom. For Mariana, safe sex is having a boyfriend, just one, and using a condom.

She says she feels fine talking about subjects relating to sexual health, although she appeared to be somewhat uncomfortable. She talks with her friends about sex, pregnancy, and upon suggestion by me, also about safe sex and using condoms. She does not talk with her family about anything related to sex or sexual health. She talks with her partners about these subjects, although she would not open up about what they talk about specifically. She does note, however, that you can never be sure if what they say is true.

In her experience, she notes rarely using condoms during vaginal sex, although always when performing oral sex. When I ask why she uses condoms only rarely, she mentions that she uses the pill, but sometimes uses the pill wrong and then uses a condom. She used a condom in both her first and last times having vaginal sex. Her main motivation for using condoms is to prevent pregnancy. She does not know if she is at risk of getting an STI; however, she says she may be at risk since she her partner could be sleeping with other women without her knowing.

She knows where she can get a condom for free, but could not identify a place to get tested for an STI. She has never sought out medical attention to see if she has an STI, nor does she know the STI status of her partner.

### Knowledge

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A study about general knowledge of STIs of low-income adolescents in São Paulo found that most research participants were “single, sexually active, and with little knowledge concerning STDs” (Doreto and Vieira, 2007). The majority of this study’s participants were sexually active; however, differing from Doreto and Vieira’s research, the most of the students studied were in a relationship and with a great variation in knowledge about STIs. The majority of the students interviewed described their knowledge about STIs as “*mais ou menos,*” (average), although their actual knowledge levels varied immensely. When asked to please give “*uma definição básica para o que é uma doença sexualmente transmissível*” (a basic definition of what is a sexually transmitted infection) the students responded:

*“É uma doença que é transmitida pela relação sexual.”  
It is an illness that is transmitted through sexual activities.*

*“Não sei...como sífilis quando sai pus. Passa pelas pessoas com vários parceiros.”  
I don’t know, like syphilis when pus oozes. It passes through people with various partners.*

*“Pode tirar a vida.”  
It can take your life.*

While the above definitions demonstrate a varying understanding of what exactly an STI is, all of the interviewed students were able to identify that a person can get infected by STIs through sexual behavior and that using a condom is an effective method to prevent the transmission of STIs.

These qualitative findings are consistent with the results from the questionnaire, which found that while 98.3% of the students knew how to prevent the transmission of STIs, only

80.3% knew the symptoms of STIs. Moreover, all students who participated in the interviews and questionnaire knew where to receive free condoms. While the students may not have a full understanding on what an STI is, or its symptoms and biology, preventing its transmission has been an influential component of their STI education. This has most likely been facilitated by Brazil's free condom campaign, which functions in all *Unidades de Saúde*, and provides free condoms to all users of the health post and distributes them regularly as part of their family-planning services (Noronha, 5 November 2010). In Santo Antônio de Jesus alone, 252,394 male condoms were distributed to the SUS health posts, reference centers, and health fair events between January and October in 2010 (Coordenação Municipal de DST/AIDS, 2010).

Although Brazil's free condom service is an important and influential campaign to advertise prevention strategies, "making condoms readily available is an altogether insufficient response" (Farmer, 2001: 89). In addition to condom usage, two students cited using oral contraception to prevent the transmission of STIs, further emphasizing that while students know that condoms are an effective method of prevention of STIs, they are lacking the educational foundation to understand *why* condoms are an effective method of STI prevention and why oral contraception is not. It is imperative for young adults to learn about sexual health, to create an educational foundation to supplement these prevention strategies in order to understand the whole picture of STI transmission and protect themselves accordingly.

### Education

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Mimicking the disparities in knowledge about STIs, the students had differing educational experiences learning about STIs. The students reported starting to learn about STIs at varying times, ranging between the ages of 10-18. The students who began learning about STIs when they were 17-18 years old were sexually active and did not feel comfortable talking

with their families about subjects relating to sexual health, much like Daniella and Mariana. Remembering that the average age of sexual initiation of the surveyed students was found to be 16.5 years, and that 66% of the students began having sex before the age of 18, it is important to note that some students are not learning about STIs until after they become sexually active.

Contrastingly, the two students who started learning about STIs between the ages of 10-13 cited their families as an important resource of STI information, explaining that their mothers began talking with them about sexual health when they were growing up. These students felt more comfortable talking about sexual health and related subjects, were knowledgeable about STIs and how to prevent transmission, and learned about STIs earlier than the other students, which was also much earlier than the majority age of sexual initiation. These students are not currently sexually active, and when asked, note that they will probably continue to talk with their mothers about these subjects when they become sexually active.

About two-thirds of the students surveyed do not feel comfortable talking with their families about subjects relating to sexual health. Of these young women, 75% are sexually active. For future projects, facilitating the conversation between adolescents and their families about subjects related to sexual health can contribute to the child's knowledge about sexual health, his or her comfort level with subjects relating to sex, and contribute to a healthy, open relationship between parent and child. Additionally, starting the dialog about sexual health early with young men and women is essential to improving the sexual health of the overall population. With 56% of the reported STIs in the municipality being from individuals between the ages of 20-35 (Coordenação de DST/AIDS), adolescence and young adulthood is the ideal time to begin the discussion about sexual health, before they inevitably enter the risk group of individuals between the ages of 20-35 and become at greater risk of receiving an STI.

It is important to consider that not all of the students who began learning about STIs later in their life had a worse understanding of STIs. Like Simone, the students who cited school, *postos de saúde*, and *palestras* as important sources of information about STIs demonstrated the greatest knowledge about STIs through their performance on the quiz. Remembering the distribution of resources for STI information (Graph 3, page 21) it is clear that the *postos de saúde* and *feiras de saúde* (health fairs run by the *unidades* or other SUS health centers) are the most commonly cited resource of STI information for sexually active young women, and potentially, the most important.

The *unidade* teams need to take advantage of this opportunity, collaborate with educators, and create not just a single *palestra*, but a full course about sexual health for young adults and adolescents. This course could be through the school system, or by *unidade* area, but should aim to teach a full course of sexual health, over a number of meetings, to the same individuals. For example, the group could meet every Tuesday night for two months, or every first Monday of every month for a year, and each class would cover different, but related subjects about STIs, healthy relationships, and safe sexual practices. A long term, comprehensive course with these individuals will not only increase their own knowledge about sexual health, but will spark conversation with their peers. Since more than 73% of the surveyed students noted talking with their friends about sexual health, the knowledge acquired by individuals in these long-term courses have the potential to spread through the young-adult and adolescent community.

Furthermore, in considering the differences in the distribution between the sexually active students and the non-sexually active students, it was found that the non-sexually active students talk more with family and friends about sexual health, while the sexually active individuals seek out information from non-personal sources. This is both a reflection of their unease discussing

these subjects with people, and also an indicator of their lack of human resources. However, this trend and the overall higher average of sources selected by sexually active individuals demonstrate that these young women *are* seeking information and are looking to learn more. The first suggestion targets opening up conversation with family about topics relating to sexual health. Additionally, health professionals and educators can understand that these individuals are looking to the internet for information, and provide them with websites that contain reliable and comprehensive information about STIs, what they are, their signs and symptoms, and other related topics, so that if the individual does not yet feel comfortable talking with family, friends, or other people about the topic, they will have a dependable, informative option.

#### *Condom Use*

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*“Sempre uso, sempre...para impedir gravidez e as doenças. Só confido em mim, os parceiros não.” – Simone*

*“Eu fico com um homen que fica com outras parceiras. Eu sempre uso camisinha com ele porque é possível que ele não esteja usando com as outras parceiras. Uma vez, eu não usei com ele. Fui ao posto para fazer exame.” – Daniella*

*“Eu uso camisinha raramente porque eu uso a pílula. Mas, as vezes é errado, e uso camisinha”  
– Mariana*

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“I always use condoms, always...to prevent pregnancy and STIs. I can trust myself only, not my partners.” – Simone

“I am with a guy who is also with other women. I always use a condom with him because it is possible that he is not using condoms with his partners. One time, I did not use a condom with him. I went to the health post to get tested.” – Daniella

“I rarely use condoms because I use oral contraception. But, sometimes I use it wrong and then I use a condom.” – Mariana

There existed a great deal of variation in the habits of condom use in the sexually active interviewees. In these examples, there is a close relationship between condom use and

knowledge about STIs. While Simone actively seeks information about the infections and always uses protection, Mariana has learned a very small amount about STIs from the television and has incorrect knowledge about the uses and limits of oral contraception. Because of this, she does not use condoms with any consistency or frequency. Daniella knows how and why STIs are passed between people and where to get tested for STIs, but still had unprotected sex with her partner who she knows has other partners.

All of the interviewees noted that it is common for their peers to use condoms during vaginal sex. Contrastingly, only 47.3% of the survey participants reported using a condom at every sexual intercourse. This information indicates that there exists a difference between what the students think is happening and the reality of condom use in their population. This discrepancy suggests that the young women are discussing the use of condoms amongst themselves; yet consistent condom use is not being realized in the majority of their sexual relationships. Adding that 98.3% of the students marked knowing how to prevent STI transmission, the frequency of condom use is incredibly low. These disparities could be due to a lack of knowledge, where students marked that they know how to prevent the transmission of STIs, but are like Mariana and using oral contraceptives to prevent STI transmission.

The differences between knowledge, practice, and popular belief could also arise in the conversations with friends about hypothetical situations versus the personal, situational conversations that occur between partners. When asked about why their peers use condoms, the students unanimously responded to avoid pregnancy and to protect oneself against STIs. When asked about why their peers do not use condoms, the students had various responses:

*“Ele não gosta.”
He doesn’t like it.*

*“Ele acha que não sente tão boa com camisinha”
He thinks it doesn’t feel as good with a condom*

*“Ela sente segura que ela fica com pessoa limpa”
She feels safe that she is with someone who is clean.*

*“No momento, a gente não conversa, e não usa.”
In the moment, they don’t talk about it, and they don’t use it.*

The strong male influence in these responses prompted questions about the differences between men and women and their knowledge and preferences about condom use. One student noted that young men and women have the same knowledge about STIs and condom use, while another thought that women worry more about infection, and therefore research more about the subject. She notes that men do not think that they have to worry about infection. When asked about the different preferences that men and women have about condom use, all of the students agreed that these differences exist. They note that women want to use condoms, but men do not because they do not like them. Women always want to protect themselves, but men do not. For men, it feels better without a condom and prolongs the experience, so they do not want to use condoms. One student also notes that in discussions about condom use, the woman will inevitably yield, and they will continue without a condom.

While all students know where to receive free condoms, less than half of the sexually active students use them in every sexual intercourse, and significantly less for oral sex. As suggested by the interviews, men have a more unenthusiastic attitude about condom use. This could be the result of the lack of attention men receive in the health system. Both Juçara Bomfim, the nurse technician at *PSF* Amparo, and Carolina Arrigoni Lopes Noronha, the nurse and coordinator of *Unidade de Saúde* São Francisco, note that the distribution of condoms is generally done through family planning, which targets only women, and health *palestras* and events, which are attended almost exclusively by women. Between family planning, women’s

health services, and pre-natal care, women receive ample educational and professional support from the health system, in addition to routine screenings for HIV and other STIs. When asked about health events for men, Noronha describes that she does not perform *palestras* for men because she does not have adequate information about men's health or educational brochures to hand out on the subject. Additionally, the vast majority of health workers in the public sector in Santo Antônio de Jesus are female, as was demonstrated in a number of gatherings of health professionals attended by the researcher. In each case, whether the meetings were attended by *unidade equipes* (health post teams), nurses and doctors for an educational workshop, or a group of health professionals to run health campaigns like World AIDS Day, at least 90% of the professional attendees were women. The unbalanced dichotomy between male and female knowledge and ideologies about condom use is a vital and fundamental factor in considering condom use in young women, and could be rooted in the health system's ignorance of men's health issues. The inclusion of men in the health system, both professionally and educationally, could be an important factor in closing the gap between men and women's knowledge and ideologies about condom use and sexual health.

In order to target this dichotomous dynamic effectively, more research needs to be done to explore the sexual health of young men. A similar, but slightly augmented version of this research could be replicated to target young men, investigating their sexual practices, knowledge about STIs and sexual health, and thoughts about sexual health and condom use in their own lives and the lives of their peers. This research will help health and education professionals to better understand the relationship between young men and women in both a social context and in the context of their sexual activity, as well as and how these factors affect condom use in these vulnerable populations.

Although Noronha's sentiments about men's health *palestras* are popular, steps have been made to battle this discrepancy. In the last week of October, a *unidade* near the center of Santo Antônio de Jesus hosted their first men's health campaign, which was facilitated and taught by professors from the *Universidade Federal de Recôncovo da Bahia (URFB)*. The *palestra* was attended by eighteen men between the ages of 22-82. Topics included in the *palestra* ranged from prostate health, to nutrition, hypertension, and sexual health. The CTA/SAE Viva Vida supplied rapid HIV and syphilis testing for all participants and condoms were distributed to all attendees. The *palestra* facilitated discussion about the health of the male community, including men in the discussion for the first time. Additionally, the rapid syphilis tests revealed one positive case, which in itself is crucial in preventing the spread of the infection and treating all partners involved. Men's health campaigns provide the opportunity to educate men on health issues that are pertinent to them and their partners, to provide exams to detect undiagnosed cases of STIs in an otherwise ignored population, and to open up the dialog of men's health to the community, ideally resulting in the improved knowledge, education, and health of the entire population.

Additionally, as stated earlier, starting the dialog about sexual health early with young men and women is essential to improving the sexual health of the overall population. The health fair for *O Dia Mundial da Luta Contra AIDS* (World AIDS Day) catered almost exclusively to young adults. The Coordenação de DST/AIDS contacted the schools and theater programs to invite students of all ages to attend and perform at the fair. The event distributed condoms with informational pamphlets to all who came by the distribution table, and condoms were handed out to men and women of all ages, including condoms of a smaller size that were made specifically

for adolescents. A number of young men and adolescent males came by the table to pick up condoms, which received mixed emotions from the crowd. One health professional suggested that condoms only be given out to individuals over the age of 14; however, another professional added that adolescents are beginning their sexual activity earlier than the age of 14, and it was crucial that they know how to protect themselves. Although this is a controversial topic with support on all sides, the dialog has started, which is an essential step in identifying effective sexual health campaigns for these younger individuals. The young adults and adolescents at the fair demonstrated their curiosity in their actions, questions, and principally, their attendance, which is vital information for future projects.

Conclusion / Conclusão

The final section of the interview asked the students if they thought there was a difference between their peers' knowledge about STIs and their practice of prevention methods. The answers were similar, but involved a variety of factors. One student says that people know about prevention, but do not use it. Another student spoke about women that know about STIs and prevention that still yield to men's wishes. Finally, one student simply states that there is little knowledge about the subject and its importance among her peers, noting that people her age are not seeking information about these subjects.

This research provides the foundation for further research and health work with young adults to explore these disparities. Connections drawn between the young women's knowledge, perception of knowledge, and education about STIs and sexual health leads the researcher point attention to facilitating the dialog about sexual health with the family, creating long-term learning opportunities through the health posts and schools about subjects relating to STIs and

sexual health, and providing, through the health posts, reliable and educational websites for individuals to learn more about STIs independently.

The information gathered from the interviews, questionnaires, and health professionals about sexual behavior and condom use leads the researcher to suggest more attention be given to the male population. The participants' responses to questions regarding condom use, most often referring to the reaction of their male partners as a factor related to non-use, leads the researcher to urge that more research be done to identify the factors that affect a young man's knowledge about STIs and use of condoms. Additionally, including men in the health dialog through men's health campaigns will improve the population's general knowledge about sexual health and provide these men the opportunity to have routine STI screenings, which is currently unavailable for men in the public health network.

Implementing these interventions, or opening the dialog to discuss these issues is the first step towards eradicating sexually transmitted diseases from the population. By targeting the specific social factors that precede STI transmission in prevention campaigns, STI rates in all populations, including young women, should drop dramatically.

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Appendix B: Interview Invitation – “A Saúde Sexual das Mulheres Jovens”

1. Eu gostaria participar na entrevista sobre a saúde sexual das mulheres jovens.

Nome: _____

Email: _____

Número do telefone: _____

Tenho aula de manhã / de tarde (marque um)

Tempo livre para a entrevista: _____ Uma hora antes de escola.
_____ Depois da escola (para uma hora).
_____ Durante almoço.

2. Eu não gostaria participar na entrevista.

Appendix C: Structured Interview Guide for Students

Parte 1: Informação sobre participante.

1. Idade: _____

5. Agora, você é:

- a. Casada c. Solteira com namorado
b. Divorçada d. Solteira sozinha

7. Você é sexualmente ativa? S N

Parte 2: Conhecimento das doenças sexualmente transmissíveis (DST).

8. Quais são as fontes mais importantes do seu conhecimento sobre doenças sexualmente transmissíveis?

9. Por favor, me dê uma definição básica para o que é uma doença sexualmente transmissível (DST):

10. Quais são as DST que você conhece?

11. Como uma pessoa pode pegar uma DST?

12. Quais são os métodos de prevenção para impedir transmissão das DST?

13. O que é sexo seguro para você?

Parte 3: Pensamentos sobre a prevalência de DST na população de mulheres jovens.

14. Com que idade você começou aprender sobre DST? Como você avalia seu conhecimento sobre transmissão e prevenção de DST? As pessoas da sua idade?

15. Sente-se confortável falando sobre assuntos sexuais e DST? Por que?

16. Você fala com seus amigos / suas amigas sobre os assuntos sexuais? Falam sobre que? O uso dos preservativos / sexo seguro e DST?
17. Você fala com sua família sobre os assuntos sexuais? Falam sobre que? O uso dos preservativos / sexo seguro e DST?
18. Você fala com seus parceiros sobre os assuntos sexuais? Falam sobre que? O uso dos preservativos / sexo seguro e DST?

18a. E quando você tiver um novo parceiro, vai falar sobre estes assuntos?

19. Você conhece uma pessoa que teve uma doença sexualmente transmissível (DST)?

Como ela soube que estava com DST?

Ela recebeu tratamento?

20. Você acha que é comum para pessoas da sua idade usarem camisinhas durante sexo oral? sexo vaginal? Por quê?

20a. Quais são os fatores que afetam na decisão de usarem camisinhas?

21. Você acha que mulheres e homens têm conhecimentos diferentes sobre o uso das camisinhas? Quais são?

22. Você acha que mulheres e homens têm preferências diferentes sobre o uso das camisinhas? Quais são?

23. Você acha que existe uma diferença entre o conhecimento sobre DST e a prática dos métodos de prevenção nas pessoas de sua idade? Quais são as diferenças?

Parte 4: Se a mulher começar a vida sexual, perguntas sobre a vida sexual dela.

23. Você acha que está em risco para pegar uma DST? Por quê?

24. Em todo sexo oral, você tem o hábito de usar camisinha? Com que frequência?

Primeira vez / última vez?

25. Em todo sexo vaginal, você tem o hábito de usar camisinha? Com que frequência?

Primeira vez / última vez?

27. Quais são os fatores que afetam sua decisão de usar camisinha?

28. Você sabe onde pode pegar uma camisinha de graça?

29. Você sabe onde pode fazer um diagnóstico para saber se teve doença sexualmente transmissível (DST)?

30. Você já procurou uma Unidade de Saúde para saber se teve DST? Se sim, porque?

31. Você sabe se seu último parceiro possuía uma DST? Como você pode afirmar que ele não possuía?

Appendix D: Semi-Structured Interview Guide for Health Professionals

1. Quais são os modos mais comuns de transmissão? Nos adultos jovens?
2. Quais são as razões mais comuns para uma pessoa fazer teste para DST?
3. Quantas camisinhas são pegadas por semana? Quem normalmente pega camisinhas nesta facilidade? (Homens/Mulheres, idade, em grupos ou sozinhas)
4. É comum para adultos jovens pegar camisinhas? A maioria das pessoas são mulheres ou homens?
5. Numa campanha para adolescentes/adultos jovens, tipicamente há uma parte sobre a saúde sexual? O que está ensinado sobre isto?
6. Como os adultos jovens reagem a estes assuntos? Com vergunha? Com entusiasmo?

Appendix E: Interview List

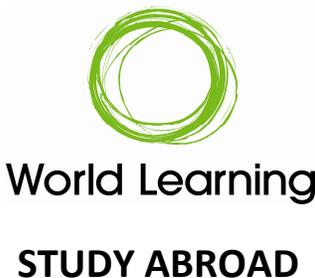
Com Estudantes:

- | | | |
|--------------|---------|-----------------|
| 1. Simone* | 12:15PM | Friday, 11/19 |
| 2. Daniella* | 4:45PM | Monday, 11/22 |
| 3. I* and R* | 11:10AM | Thursday, 11/25 |
| 4. G* | 4:45PM | Thursday, 11/25 |
| 5. Mariana* | 11:00AM | Friday, 11/26 |
| 6. V* | 11:30AM | Friday, 11/26 |

Com Profissionais:

- | | | |
|---|--------|---------------|
| 1. Juçara Bomfim, Nurse Technician:
PSF Amapro | 9:30AM | Friday, 05/11 |
| 2. Carolina Arrigoni Lopes Noronha, Nurse/Coordinator:
Unidade de Saúde: São Francisco | 3:00PM | Friday, 05/11 |

Appendix F: Termo de Consentimento for Student Interviews



PROJETO: “Conhecimento sobre DST e os Pensamentos sobre o Uso do Preservativo das Mulheres Jovens”

TERMO DE CONSENTIMENTO

Eu, aceito participar do estudo “**Conhecimento sobre DST e os Pensamentos sobre o Uso do Preservativo das Mulheres Jovens**” realizado por **Ariel Spigel (SIT Brazil PHRHR)** e estou ciente que a minha participação é inteiramente voluntária. Por outro lado, estou sabendo que não serei identificado(a) em nenhum relatório ou publicação que possa resultar desse estudo e que toda informação pessoal obtida através dessa pesquisa permanecerá confidencial e em conformidade com o código de ética médico.

Local: Data: de de 2009.

Assinatura:

Avenida Sete de Setembro, 62 (Sala 616), Dois de Julho,
CEP: 40.060-001 Salvador, Bahia.

Appendix H – Personal Reflection

The Independent Study Project was an irreplaceable educational experience that I would never have had the opportunity or desire to achieve outside of this program. It is difficult to find words that adequately describe the impact this experience has had on my life. I have felt immense personal growth in all areas of my life.

Academically, I ventured far outside of my comfort zone to pursue my first research project in a foreign country with both a different culture and language than my own. I had never taken a research methods class outside of this program, nor had I ever seriously considered pursuing a public health research career. In three months, I absorbed all I could about a new culture, learned as much of the language as my little head could handle, designed my first research project, and carried it out completely. I never could imagine mastering Portuguese to the point of conducting extensive interviews and discovering meaningful data that sparked forty minutes of discussion among Brazilian health professionals.

Socially, I have stepped way out of my shell and expanded my comfort zone to include meaningful relationships with an entire, extensive Brazilian family, the family who owns the local internet cafe, the mechanic who works across the street, and the waitresses and owner of our favorite restaurant, Lua Cheia. Throughout this semester experience, I have held doubts about my ability to make significant relationships here, based solely on the language divide. I realize now that the spoken language is not as big of a component of a meaningful friendship as I had imagined, and that there is so much more to be said about power of trust and humor in these relationships. This experience has definitely affected the way I will interact in the future with every person I meet, from the woman on the bus, to my closest family and friends. Each relationship, when allowed, can grow into something beautiful and memorable.

Personally, words truly cannot describe how much I feel that I have grown. I have experienced so many new things in the past six weeks during the ISP and the past three months during the semester that will be with me for the rest of my life. The independence and cultural integration have absolutely changed me in ways that I still have yet to figure out completely.

Theoretically, my research project could be carried out in the United States; however, the coordinated network of Brazil's health care model acted as an invisible foundation of my project. Connections drawn and recommendations made were based on my experience with the SUS system, and the relationships between the Unidades de Saúde, reference centers, and hospitals. Changes would have to be made to the project if it were conducted in the United States to include analyses relating to access to health services and the financial burden of buying condoms.

The majority of my data is primary data from research, or information that was obtained from professional workshops during the ISP period. Some research studies were cited to provide a background of what has already been studied. Data from the questionnaires, interviews with students, interviews with professionals, and personal analysis represent the bulk of my paper. During my experience in the CTA and with health professionals in non-interview settings, a significant amount of information surrounding the topic of my research was obtained; however, it was impossible to include every piece of information I received during this period in an organized and timely fashion. Excluded data included information that only somewhat related to the topic, but existed outside of the age-range, or did not relate directly to other existing data.

The semester courses definitely prepared me for the ISP experience. The Drop-Off exercise was invaluable, showing me right away that I had the courage to talk with strangers in a language I barely knew, and that talking with people provides the opportunity to truly gain

insight into another person's life. The afternoon excursions with PHMFSS demonstrated to me the realities of the health system in Brazil, both the good and the bad, which played an immense role in my understanding of the health system and Brazilian culture.

The biggest problem I encountered in my ISP was making and keeping interview appointments. From eighteen pieces of contact information, I was able to contact sixteen, make appointments with ten, of which two were realized. The next most difficult part of the ISP was changing my methodology and trying to get random students to participate. However, I was able to obtain four additional interviews in this manner. With more time, I would realistically not have been able to obtain more interviews since school is ending; however I would have been able to better organize the gigantic amounts of information that I obtained through daily experiences in a way that would be useful for inclusion in the ISP monograph.

My advisor, Oade, was an absolute gem. She kept me on track, getting me started with professional interviews incredibly early, while also giving me complete independence in conducting my research. She was genuinely interested in my research and incredibly supportive throughout the whole experience.

My recommendations to a student who is interested in a similar project would be: be prepared for many people not to feel comfortable talking about sexual health, but be persistent and you will meet someone who has a lot to say.

I am eager to continue this research and implement the recommendations that I made in the target population. I would like to replicate the research project with the male students, to get a more holistic view of the situation