

Assessing Undergraduate Students' Sexual Practices, Perceptions of Risk and Sources of Information

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Abstract The findings reported here form part of a larger research project that the main aim of this study was to survey the sexual practices and perceptions of risk among undergraduate students attending a tertiary institution in Jamaica. To answer the research questions, a cross-sectional survey research design was used. A total of 541 undergraduate students were selected using the stratified random sampling method. Data were collected through the use of a questionnaire and focus group discussion. The questionnaires data were analyzed using descriptive and inferential statistics while the focus group data were analyzed using thematic analysis. The results showed that 66.4% of the respondents obtained most of their information on sexually transmitted infections from the mass media. More than half of the respondents (67.1%) used condoms during sexual activity and 52.6% stated that they have not changed risky behaviors despite concerns about Sexually Transmitted Infections (STIs). The Ministry of Health has instituted STIs campaigns and despite these campaigns the findings showed that only 32.7% of the respondents reported not using condom during sexual intercourse. The findings seem to suggest that there is still much to be done in terms of enlightenment campaigns, because of health hazards associated with risky sexual practices. Based on the findings and their implications the following recommendations were made: the Ministry of Health and the National Family Planning Board should be involved in campaigns that will target parents, schools and churches, to empower them with the tools that will help them to guide their children/relatives who are students about sexual practices and decision making.

Keywords Behaviours, Communication, Information, Media, Parents, Sexual intercourse, Sexual practices, Sexually Transmitted infections, Perceptions of risk

1. Introduction

Media coverage of HIV/AIDS is a fundamental part in the struggle against the disease. The importance of mass media in health promotion and disease prevention is well documented, since both routine exposure to and strategic use of mass media play a significant role in promoting awareness, increasing knowledge and changing health behaviors [1, 2]. Accordingly, mass media campaigns have been reliably linked to an increase in HIV/AIDS knowledge among individuals in low-income countries [3], including an awareness of HIV/AIDS, the ways in which the virus is transmitted, and preventive behaviors [4]. Knowledge is an important determinant in the pathways to changing health behaviors [5]. In the case of HIV/AIDS, a high level of awareness is likely to promote safe sex practices such as the regular use of condoms, which may reduce the prevalence rate of HIV infection [6, 7].

The findings of two studies on HIV done in Nigeria,

identified mass media as the predominant source of information for HIV/AIDS, STIs [8, 9]. According to Abdool Karim, and Meyer-Weitz [10] mass media campaigns utilizing television, radio, posters and billboards have been shown to be more effective for addressing specific issues. They have also been proven to be effective in increasing knowledge, improving self-efficacy to use condoms, influencing social norms, increasing the amount of interpersonal communication and raising awareness of health services [11].

Today various sources provide young adults with information on sexual and reproductive health issues, including STIs. These sources include family, teachers, friends, health professionals, and the mass media [12-14]. Similar to studies conducted among college students in China and South Africa [15, 16], participants relied on the mass media (e.g. Internet, newspapers, magazines, television) as their main sources of HIV/STI information and their friends as discussion sources. Fennie and Laas, [17] conducted a study among 220 South African university students which revealed that 23% of the respondents noted that they have received HIV/AIDS information from peer educators and friends equally, teachers (22%) and parents/caregivers (18%).

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Associated literature such as in [18] found that adolescents without parental supervision are more likely to emerge in early sexual debut, increasing their vulnerability to HIV and STIs. This is in contrast with a study done by Dawood, Bhagwanjee, Govender, and Chohan, [19] who found that the preferred sources of information included television (84%) teachers (39%), friends (32%) and parents (28%). Key places to obtain sex information were indicated as the health centre (31%), the internet (21%), television (16%) and school/university (15%). A cross-sectional study conducted by Ajmal, Agha, Karim [20] among 957 undergraduate university students of Karachi, Pakistan reported that the four most common sources to acquire knowledge related to sex were friends (36.5%), internet/television (31.0%) and books (32.5%). Only 46.4% of the participants reported to ever talked with someone regarding sexual problems. Friends (42.0%) were the most common source to discuss sex issues.

Pavlich [21] in their study reported that, only 46% of the participants received information on campus while 50% did not receive information on campus. Participants stated that they've received information from a variety of sources including college classes, residence halls or campus housing, student clubs and organizations, the Student Health Center, health fairs, pamphlets or brochures distributed on campus from a variety of sources, the university newspaper, and informal discussion with friends. The majority of respondents stated that they've received information from college classes and from pamphlets or brochures.

In their own study, Kirby, Laris and Roller [22] who reviewed 83 evaluations of sex and HIV programmes that were based on a written curriculum and that were implemented among groups of youth in schools, clinics, and other community settings in both developed and developing countries, found that that the programmes resulted in a significant delay in sexual initiation. The programmes also reduced frequency of sexual intercourse among the youths and also decreased the number of sexual partners. The review found increases in perceived risk, improvement in measured values and attitudes, improved perception of the disease, as well as increased motivation to abstain from sexual intercourse or if not possible, restriction in the number of sex partners. In another systematic review of the research published on the impact of girls' education on sexual behaviour and HIV in Eastern, Southern, and Central Africa.

Parents are often hesitant to initiate conversations about sexual risk behavior and prevention of the spread of HIV/AIDS in part owing to perceptions that children are not ready to receive information about sexual issues [23] and lack of knowledge, skill, comfort, and confidence [24, 25] to have such discussions. DiIorio, Pluhar, and Belcher [26] claimed that many parents, however, either do not talk to their children about sex at all or have only limited communication on the topic.

According to Petersen, Bhana and McKay [11], it is also

possible that the older generation had not received any information on sex education, making it difficult for them to approach the issue as parents themselves. Furthermore, residential patterns and family structures might reduce the opportunity to discuss sensitive topics like sex. Geasler, Dannison, and Edlund [27] stated that although parents hope to do better the sexuality education they provide often resembles the level that they received from their own parents [28, 29]. Asante and Doku [30] found that only 27% of the students received information from their parents. Studies also have indicated that parents' perceptions of their own sexual knowledge and comfort levels in talking about sexuality influence their communications about sexuality with their children [31, 32]. For example, Jaccard, Dittus, and Gordon [33] found that the two most important reservations mothers had about discussing sexuality with their adolescent were related to knowledge and comfort: fear that they would be asked something that they did not know and embarrassment when talking to their adolescent about sexuality. Further, parents who had received sexual health education, and presumably felt more knowledgeable and likely more comfortable talking about sexuality, were more likely to communicate with their children about sexuality [34]. According to Guilamo-Ramos, [35], teenagers appeared to be uncomfortable and embarrassed having conversations about sex with their mothers. They expressed fear of parental punishment and anger about the fact that they were sexually active.

2. Methods

A cross-sectional survey research design was used which allowed for the utilizing of both qualitative and quantitative data collection and data analysis. According to Creswell [36], "in a cross-sectional survey research design, a researcher collects data at one point in time" (p. 389).

Students who were used in this study were from the main campus and were selected using the stratified random proportionate method. The sample size was (n=541). A total of 33 participants agreed to participate by providing their contact information i.e. emails and telephone numbers. The researcher contacted the volunteers and explained verbally, the purpose of the invitation, their role and dates. From the 33 volunteers and the dates agreed upon, five focus groups were formed. Ethical approval was obtained from the Research Ethics Committees of the University of Technology, Jamaica.

3. Results

Information on sexually transmitted infections. The participants were asked to indicate the medium from which they obtained information on sexually transmitted infections and were given options from which to select. As shown in Table 1 the most common medium through which the

participants obtained information was the mass media.

Table 1. Information on Sexually Transmitted Infections by Gender

Information	Gender		Percentage
	Male	Female	
Mass media	163	196	66.4
Teachers	115	144	47.8
Pamphlets	83	102	38.2
Friends	76	109	34.1
Internet	78	90	31.0
Parents	68	53	22.3
Cellphone via text	42	26	14.6
Mobile STD screening clinic	21	30	9.4
Cell phone via email	10	20	5.5

Media influential in promoting sexually transmitted infections prevention. Thirty- three participants were asked about their views on STI media (television and radio) campaigns. Twenty – one or 66.3% of the participants acknowledged that the media is influential in promoting STI prevention messages for young adults and children. Some of the extracts of the discussions are presented below. To protect their identities only their gender and age range were used.

The media was very effective in showing how STI can be transmitted, also the internet when you see pictures of persons with STIs it gives you that scare so you know definitely to use a condom or to abstain. (Female, 18-25 years)

I obtain information on sex from the television I learnt about the different types of STIS such as herpes, gonorrhoea, syphilis how they are transmitted and how to prevent it and the best way to do so is abstinence. (Female, 18- 25 years)

The media is good it tells me that abstinence mek sense. (Male, 18-25 years)

The television and the radio are effective to me because they portray the youth saying that they will wait until marriage or when the time is right. I think that when other young people see these advertisements they will try to put the pieces together and say if he or she can wait why can't I. (Male, 18-25 years)

The media is doing somewhat of a help because you know as young people we tend to watch TV and go on the internet. When you watch the TV it is in your face where you see an advertisement which reinforces what you know to prevent one from catching sexually transmitted infections (Female, 18- 25 years)

We can get the information from the television, and radio. They are effective. I learnt that I should use condoms at all times and not to have unprotected sex. (Male, 26-35 years)

The media to a certain extent provides information on STI hence it is effective in creating awareness about the consequences if one does not use protection.

(Female, 36-45 years)

Missing information in the media. Some participants stated that the media campaign on STIs omitted some important facts such using beating themselves up in order to have an abortion. The comments made by two participants are stated below.

In my community there are a lot of young girls becoming pregnant and having one, two, three and four, children. I think that the media should be real in passing on the message. The media try to pretty it up and not tell them the hard core facts such as if you have unprotected sex and you pull out before that does not mean that everything will go well and if dem do it the first round and go the second round sperm is still in the tract and it will still go into you, one will get pregnant.

(Male, 18-25 years)

The media is not telling the young ones that they should not beat up themselves to loose the baby.

(Female, 18-25 years)

Perceptions and practices of students based on sexual information received

Lack of sexual information from parents. Although a majority of the males indicated that they discussed their sexual activities with their parents, some of the male participants stated otherwise. Presented below are their responses.

My parents never tell me anything about sex, what I know is what I heard from media and some other experience. (18-25 years)

During my younger years I have never had the sex talk with my parents; however I read a lot so I understood the dangers of going into this type of practice. I remember once there were some representatives from the World AIDS foundation and they issued handouts, I went on the internet and spoke to my older cousins about it. I think that some persons might find it awkward to talk to their parents about sex. (18-25 years)

I have never received information from my parents. From time to time I do have phone sex and I remember one instance my mother came into my room and for some reason she was prying into my phone and saw some derogative language and materials that were used which included pictures of the penis. She consulted me in the morning and asked me if I knew that AIDS and syphilis is going around. (18-25 years)

No my parents told me nothing. My personal practice to abstain is based off observation. What I see in my community led me to believe that abstinence is the right way cause a lot of my friends, well some died because of AIDS, some baby fathers, some teenage baby mothers. (18-25 years)

No! My parents told me nothing about sex. I learnt about sex from school and my peers which was good because the parent's nuh talk to mi bout dat. Yuh nuh

tek dem advise fully but do yuh own research and compare and see what is what. (18-25 years)

Below are the responses from the female students who did not receive any information from their parents about risky sexual practices.

No my parents did not tell me anything about sex it was based on my own knowledge. Sex is not talked about it is like something foreign, you are not supposed to talk about sex it is not for you unless you are an adult. As long as you are living under their roof it is not for you no matter what your age is. (18- 25 years)

At my house we don't talk about sex. My parents never mentioned the word sex to us. (18- 25 years)

Yet to have a conversation with me about sex and I believe it is because they trust my instinct and expect me to be smart and know what I am doing so I think they trust me enough to know that I am not going to do anything stupid. I learnt about sex in grade 5 when my friend showed me the word in the dictionary. I was shocked, scared... I don't know. (Female, 18- 25 years)

My parents and I don't have that talk so there is nothing much to learn from them. I learnt about sex from high school friends, television, radio etc. (Female, 18- 25 years)

Growing up I was not taught anything about sex from my parents. I heard it from nosy friends who have been out there doing their stuff from a long time I am now 21 and my parents still have not spoken to me about sex and we do not have a conversation about it. I just read and say this is what I must do and what I should not do. My mother I guess was trying not to tell me about it because she thinks I do not know. (Female, 18- 25 years)

For me I was not taught about sex by my parents. According to them, well they believe that sex is for married people. As a young person it should be church, school and home. The only time they spoke about sex is like if someone we knew got pregnant then they start saying you should not be doing that cause that is what is going to be happening to you. What I know I got it from the internet and reading. (Female, 18- 25 years)

No my mother did not know anything about sex. I found out that my mother did not have much knowledge about sex as she was not taught about it either; she just grew up and did it. (Female, 26- 35 years)

Parents' advice about sex. Ten of the participants acknowledged receiving information from their parent/s on sexual practices that were risky. Below are some of their responses.

My parents are the traditional type of family although they did not directly say do not have sex it was their indirect behaviour such as if I go around a guy they would give me the look. They informed me of the sexual practices and told me that I should not have oral sex, have one partner, use a condom, ensure the man always have a condom, check the

expiry date, and check the condom after having sex to see if it burst. (Female, 18- 25 years)

Well for most part yes. They were the first ones who told me to abstain from sexual intercourse until you are old enough to engage in that activity. And they say I should put school before sexual activities. (Female, 18- 25 years)

My mother always told me that she doesn't send me to school for boys and she do not want me to come back pregnant or else she is going to kick me out so I just take that as a warning and just abstain. Abstinence is good for some who can manage. (Female, 18- 25 years)

My parents told me not to have sex because they told me they are not going to raise children for me and do not take them home so I did not follow that advice. They promoted abstinence. (Female, 18- 25 years)

My parents advised me about sex on one or two occasions by telling me to wait and don't come home with nuh woman pickney. (Male, 18- 25 years)

In my case I would say yes because they did tell me not to although I still went ahead and have sex. I still stand by a few things that they said such as they are aware of it so they say mek sure if you do - you are not getting anybody else child pregnant. It works out in the end so to speak so I learnt from them. (Male, 18- 25 years)

For me I heard something things from my parents. They told me nuh carry nuh girl come home. If yuh get any girl pregnant you know sey yuh pack up yuh bag and come out zeen. Yuh just know sey if she miss har period a it dat and life is rough on your side. (Male, 18- 25 years)

My parents say if you cannot be good be safe. They have been talking to me about sexual practices and protection from a young age. They say nothing comes before time and always know what you are doing. (Male, 26- 35 years)

My mother spoke to me about sex because she is a health professional because she has a lot of young children visiting the health facility and she said this could have been her daughter. It came around that when I started having sex I went to her and let her know that mummy I start having sex so she reiterated the things like make sure you use condom, you do not want any baby now and all of that. She was really supportive and educative in that regard. (Female, 26-35 years)

Information received from friends, guidance counselors, teachers, internet, health centres and community health fairs. Other participants received information from their friends, guidance counselors, teachers, internet, health centres and community health fairs. Below are their responses.

My peers told me always use condoms and don't trust dem girls' yaah. (Male, 18- 25 years)

I learnt about it from my friends in Grade 5 at Primary school that if you do it like this the guys would like it. If you wine up on him so or whatever he would do this to you, see you more and show you more love. (Female, 18- 25 years)

I learnt about sex from friends. They tell me that it is good and I went about trying it also. Not supposed to do

it only when you are married. But at the end of the day we are all sinners and we go about doing our thing. **(Male, 26- 35 years)**

I have learnt since going to prep and high school. The guidance counsellors provided us with information on the risk and types of sexually transmitted infections. Other sources I received information were at the health centres, and it is everywhere even on the bus where you see the sign about safe sex or a mural on the wall where you see a pictures of condoms, and by word of mouth. **(Female, 18-25 years)**

I also got information from the guidance counselors at school such as make sure you use protection when having sex. The best thing to do is to abstain until you are able to take care of a family. **(Male, 18-25 years)**

I received sexual information from my Guidance counsellors at school where they had classes teaching us about our body, sexual urges and the different ways to prevent STIs/STDs. **(Female, 26-35 years)**

Guidance counsellors where they have classes where they teach about your body and the whole puberty thing and you feeling the urge to have sex and different ways to prevent STIs/STDs. **(Female, 26-35 years)**

The health fairs in the community conducted by persons from the Ministry of Health and the nurses from the clinic educated me a lot on the different types of STDs and ways to prevent STDs. **(Female, 26-35 years)**

My information was from my personal development teacher. I wouldn't say it was useful because I haven't tried sex per say. However they told me that one should always use a condom; make sure that the person you are having sex with have one partner and that is you, both persons should go to the clinic and have themselves tested. **(Male, 18-25 years)**

Also the health centres they do a very good job in terms of coming into my community, the youth group and church youth groups and they speak a lot about it although they speak more to abstinence. It does help and reinforce the messages. **(Female, 18- 25 years)**

I would say in the hospitals and clinics the advice from nurses and public health personnel are good, they are the best health promoting agents. The aspect that was effective was the self-teaching and research on the internet. **(Male, 26-35 years)**

Advice from friends may not be ideal. Although participants acknowledged receiving information on STIs from friends two participants acknowledged that the advice received from friends may not be the ideal.

Friends are not so very effective because they will lead you astray. They don't always give you good advice where sex is concerned. What they do is totally wrong because they do not use protection. **(Female, 18-25 years)**

My friends they don't always use protective measures so I have to be the one telling them to use

protection. So you have to know that it is not everything they tell you makes sense. **(Female, 18- 25 years)**

Effectiveness of STI campaigns

Government to improve effectiveness of STI campaign. Both male and female participants felt strongly that the government should be seeking ways to improve the effectiveness of the STI campaign. Some extracts from the discussions are presented

I would advise the government to provide more condoms in the colleges and universities because even right now there are some form of sexual activity taking place right now as we speak in the cars, bathrooms, bushes and private corners. **(Male, 18- 25 years)**

In my community there are a lot of young girls becoming pregnant and having one two three four children. If the government go into the community and talk to them it will limit the amount of teenage pregnancy. **(Female, 18- 25 years)**

Majority 66.4% of the respondents obtained most of their information on sexually transmitted infections from the mass media (television and radio). This is consistent with the findings of studies on HIV done in Nigeria, which identified mass media as the predominant source of information for STIs [8, 9]. Conversely findings from a national survey by the Kaiser Family Foundations [37], found 62% of the respondents mentioned television as their main source of information on HIV/AIDS [6, 7].

This study showed that the STI/HIV campaigns and public health agencies in Jamaica were sources from which respondents obtained information on STIs in the FGD were between 36 - 45 years of age group as against the younger age groups which reported obtaining their information from the media. This suggests that the National STI/HIV media campaign in Jamaica has enhanced the self-efficacy of respondents in their decision making. Of the respondents (16.3%) provided examples of the ways that the campaign empowered them such as (a) "staying with one partner and to use protection", (b) "learnt how to put on the condom properly", (c) "became aware of the effects of unprotected sex and took the necessary precautions to prevent contracting STI or becoming pregnant", (d) "practice safe sex by using a condom, or abstaining if no condom is present" and (e) "affirming abstinence as a choice".

This is further supported with findings from the FGD where the students highlighted the effectiveness of the STI media campaign that has made them more aware. They reported (a) being more empowered with knowledge on the signs and symptoms of STIs, (b) appreciating using a condom, and (c) having one partner and (d) how to use a condom. From the FGD it was evident that the students' perceived susceptibility and perceived severity of the risks were heightened. To some extent, there was an increased in motivation expressed by the respondents to abstain from sexual intercourse based on the testimonies of persons used in the advertisements who were inflicted with a STI. The students in this study pointed out that when they saw pictures

of persons with STIs it scared them.

A few 7.7% of the respondents reported that the advertisements seen did not convince them to change their sexual practices. They described the advertisements as “the worst ever”, “they were not relatable” and “in any case sex without a condom is fun”. Obviously, having the cues for action as indicated in the health belief model did not seem to deter some respondents from engaging in unprotected sexual activity. Their choice is contrary to the health belief model which indicates that knowledge acquired would be a cue for action. It appeared that the campaign alone was not sufficient to build self-protective skills and to improve self-efficacy.

It is clear that the teachers 47.8% in the present study played an important role in heightening the awareness of sexually transmitted infections as the undergraduates have indicated receiving information from them. This was also supported by the respondents in the FGD who highlighted some information received from their teachers including “how to put on a condom” and “being taught about the body and puberty”, “how one feels when one has the urge to have sex” and “different ways to prevent STIs”. Abdool Karim and Meyer-Weitz [10], in their study reported that the teachers as a medium through which the respondents received information. Though mass media campaigns utilizing television radio, posters and billboards have been shown to be more effective for addressing specific issues have also been proven to be effective in increasing knowledge, improving self-efficacy to use condoms, influencing social norms, increasing the amount of interpersonal communication and raising awareness of health services [10].

Thirty-one percent of the respondents in this study also gained information on sexually transmitted infections through the Internet. This was lower (21%) in the study done by Fennie and Laas, [17], among 220 South African university students. The respondents in this study believed that the consequences of getting STIs or HIV or creating a pregnancy were significant enough to try and avoid as a result of their perceived severity. Seeing the pictures on the Internet had impacted them greatly hence they were willing to take the necessary precautions to protect themselves from STIs. This finding supports the study done by Van der Snoek, de Wit, Gotz, Mulder, Neumann, and van der Meijden [38], which states that when perceived severity of a sexually transmitted infection is high, the individuals were more likely to participate in behaviors that would help protect them against contracting the infections such as condom use.

It is not surprising that the media, the internet, pamphlets, and teachers provided more information to the respondents on STIs than their parents. Parents were not a major source of information on STIs in this study as only 22.3% of the respondents indicated that they received such information from them. This was higher in Dawood [19], who found that 28% of the respondents reported that parents were among the preferred sources of information while it was significantly lower seven percent in a study conducted by Pusey-Murray and Onyefulu [39].

Associated literature such as in Rasamimari [19], found that adolescents without parental supervision were more likely to emerge in early sexual debut, increasing their vulnerability to HIV and STIs. This was in contrast with a study done by Dawood, Bhagwanjee, Govender, and Chohan [19], who found that the preferred sources of information included television (84%), teachers (39%), friends (32%), and parents (28%).

Based on the findings of this study parents were more inclined to be talking to their daughters about unplanned pregnancy than the effects of unprotected sexual intercourse resulting in STIs. This observation was supported by a female participant from the FGD declared that her mother told her she did not send her to school for boys and she should not come home pregnant or she would throw her out of the house. Another respondent recalled her parents telling her not to have sex because they were not prepared to raise the child. According to Albert [40], most adolescents and adults agree that it would be easier for adolescents to postpone sexual activity and avoid pregnancy if they were able to have more open, honest conversations with their parents about these topics.

The findings of this study indicated that a lower percentage of students 22.3% received information from their parents than Asante and Doku [30], who found that only 27% of the students received information from their parents, but even lower in Fennie and Laas [17], whose study indicated that 18% of the respondents received HIV/AIDS information from parents/caregivers. According to Petersen, Bhana and McKay [11], it is also possible that the older generation did not receive any information on sex education, making it difficult for them to approach the issue as parents themselves.

Furthermore, residential patterns and family structures might reduce the opportunity to discuss sensitive topics like sex. This is further supported by studies conducted by Croft and Asmussen [31], and Raffaelli, Bogenschneider and Flood [32], who indicated that parents' perceptions of their own sexual knowledge and conversations about sexuality often swayed their conversations about sexuality with their children. If effectively imparted, risky sexual practices communication done by parents may result in a reduction of their children's risk of STI. Another participant revealed that a child was not supposed to talk about sex. This is a conversation for adults.

This view is supported by Rosenthal et al. [25], who outlined that parents are often hesitant to initiate conversations about sexual risk behavior and prevention of the spread of HIV/AIDS in part owing to perceptions that children are not ready to receive information about sexual issues and lack of knowledge, skill, comfort, and confidence [24, 25], to have such discussions. Studies have also shown that communication between young children and their parents about sexual issues is important for influencing their decision to delay initiation of intercourse [41, 42].

Based on the findings from the focus group discussions, sexually active older respondents within the age group 36 –

45 years were less likely to communicate with parents because of fear of disclosing their sexual activity. This is astonishing since adult offspring were more likely to be open in their expressions of sexual views to parents. The younger age groups (18 - 25 years) were reserved in speaking about their sexual activities. Perhaps this could be as a result of how they were socialized while the older ones may have been guarded in what they say to their parents. One participant was very passionate about empowering those at the primary school thus parent teen sexual communication should commence when the children are at primary school level.

The respondents from the FGD who received information from both parents were noted, although only a few (9%) communicated with both parents and mainly mothers (3%) about their sexual issues. Those parents who communicated with their children about sex did so mainly with their daughters. The findings of this study highlighted that females were able to talk freely with their mothers, whereas males did not mention that they spoke freely to their parents especially their fathers. This finding is consistent with those of Wilson and Koo [43], who stressed that fathers had lower self-efficacy for talking about sex. This may suggest that fathers need guidance about how to overcome the barriers to effective communication. Further, they may need guidance and reassurance about the right development age time to talk to their children. Three percent of the respondents obtained information on sexual practices from their mothers; as opposed to their fathers Kirkman et al. [25], theorized that mothers carry the burden of sexual health communication for several reasons. They are better at communicating, they are generally associated with intimacy, and the topic is "safer" for mothers to talk about than fathers.

One respondent in the FGD indicated that her communication was very open to the extent that when she began having sex she told her mother. However, a few respondents voiced their disappointment that they did not receive sexual education from their parents. The concerns voiced by these respondents were valid as they pointed out that while growing up they were not taught anything about sex from their parents and in their house the word sex was never mentioned. The study found that there were differences in sexual behaviours and experiences among male and female respondents. More females 12.7% than males 10.8% discussed their sexual activities with their parents. According to Guilamo-Ramo et al. [35], young people appeared to be uncomfortable and embarrassed having conversations about sex with their mothers. They expressed fear of parental punishment and anger about the fact that they were sexually active. This finding highlights the significance of educating the young as well as their parents on such sensitive topics to empower them to become effective peer educators. Such findings according to Pusey-Murray and Onyefulu [39], underscore the importance of parents discussing reproductive sexual issues with their children and young adults, because this communication is believed to affect their decisions later on in their adult years

resulting in a reduction in their risk of HIV infection.

Approximately 34.1% of the respondents in this study received information from friends. This was lower in the Fennie and Laas, [17], study which revealed that 23% of the respondents noted that they had received HIV/AIDS information from their friends but higher in a study done by Ajmal, Agha, and Karim [20], where the university students of Karachi, Pakistan reported that the common source of knowledge related to sex were friends 36.5%. Only 37.1% of the respondents in this study reported discussing their sexual activities with parents or friends. The percentage was much higher in a study conducted by Ajmal, Agha, and Karim [20], where the respondents 42% discussed their sexual issues with friends. It is important to note that young people may not have enough knowledge on the sexual issue which can lead to risky sexual behaviours. This was confirmed by two respondents in the FGD who reported that advice from their friends on sex may not be ideal as these friends do not use protection during sexual intercourse.

During the FGD, respondents (23.5%) revealed that although they learnt about sex from their friends they later discovered that some of the information garnered was incorrect. For instance, one student reported, that friends encouraged her to "wine up herself on boys" in order for them to show her more love. Another respondent conveyed that, "friends do not use protection during sexual activities". However, some students were insistent about the positive impact that peers had in educating them about STI/HIV/AIDS. As highlighted previously two respondents reported that her friends taught her how to use condoms while a male recounted that his friends told him not to trust the girls and to use protection at all times.

In the present study, the author assumes that a more specific cue, namely knowing and seeing people who have AIDS, would have a potentially stronger impact on the intention to engage in risky sexual behaviour among the primary level students. The findings of this study compares with that of Kirby, Laris, and Rolleri [22], who reviewed 83 evaluations of sex and HIV programmes that were based on a written curriculum and that were implemented among groups of youth in schools, clinics, and other community settings in both developed and developing countries. The study found that the programmes had a significant effect in delaying sexual initiation as students chose to abstain. These programmes also reduced frequency of sexual intercourse among the youth as well as sexual partners. The researchers further reviewed the programmes that existed in promoting awareness of STI/HIV and reported that they: (a) drew the attention to an increase in perceived risk, (b) improved perception of the disease, (c) increased motivation to abstain from sexual intercourse, and (d) restricted the number of sex partners.

Based on the findings from this study respondents behavior as outlined in the HBM were influenced by cues to action for example, the death or illness of individuals from STI in their community (as outlined by a respondent in the FGD), the pictures with the signs and symptoms of the

genital area on the pamphlets, advice from friends, teachers, health workers and family members. These cues to actions were similarly identified by Graham [44], which were events, people or things that move individuals to change their behavior such as illness of a family member, media reports and Ali [45], who identified mass media campaigns, where individuals received advice from others, obtained reminder by way of postcards or charts from a health care provider in his study.

4. Conclusions

The mass media (TV and radio) were the most common medium the participants obtained information about sexually transmitted infections. The participants who have seen promotional advertisement on safe sex saw the Ministry of Health promotional campaigns, displays on public transportation, and murals on the walls of some communities. Both male and female participants felt strongly that the government should be seeking ways to improve the effectiveness of the STI campaigns. It is a public health imperative that if incorporated successfully demonstrated strategies from past prevention efforts into current undergraduate students STI/HIV prevention programmes and that we also continue to be innovative in ways to protect the undergraduates, as well as teach them to protect themselves, from STI/HIV infections. This could be included in their curriculum and information passed on during academic advisement sessions.

When parents converse openly with their son or daughter about sex, relationships, and how to prevent HIV, STDs, and pregnancy, they can help promote their child/children's health and reduce the chances that they will engage in risky sexual behaviors that place them at risk.

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