

Sexual behavior of female adolescents on the spread of HIV/AIDS and other STDs in Carriacou

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Abstract

This article explores information relating to female adolescents knowledge, attitudes, and behaviors toward human immunodeficiency virus (HIV) and other sexually transmitted diseases (STDs) in Carriacou. The authors aimed at finding out whether adolescent females in Carriacou receive adequate information about HIV and other STDs. Where did students receive most of their information about HIV/STDs and whether the knowledge has influenced their sexual behaviors? Furthermore, this study focused on how female adolescents feel toward people living with HIV/STDs.

Focus group method was employed with 2 age groups of female adolescent students. Content analysis was carried out by the researcher to analyze the data. Themes were developed using coding and thematic analysis.

The findings revealed that female adolescents were highly aware of HIV/STDs-related facts. They were knowledgeable and have received adequate information about HIV/STDs.

Abbreviations: AIDS = acquired immune deficiency syndrome, HFLE = Health and Family Life Education, HIV = human immunodeficiency virus, STD = sexually transmitted disease.

Keywords: adolescents, attitude, HIV/AIDS, risky behavior, sexual practice

1. Introduction

Unprotected sex is a cause for concern among adolescent females in Carriacou which can lead to the risk of human immunodeficiency virus (HIV)/acquired immune deficiency syndrome (AIDS) and other sexually transmitted diseases (STDs). In many countries throughout the world, STDs and unplanned pregnancy have always occurred among adolescents.^[1] Many adolescents are having unprotected sex with multiple partners and this of course will lead to STD and HIV transmission. Many international researches have been done on students' knowledge and behavior toward HIV and other STDs.^[2] Kelly et al^[3] claimed that some knowledge, attitude, practice, and behavior studies were undertaken in a few Caribbean countries. These were of considerable value in the way they extended knowledge

and understanding of behavioral responses to the epidemic. Information from the AIDS Secretariat, 1994 and 1996 as cited by Dicks,^[4] stated that research done in Antigua on AIDS knowledge, attitudes, practices, and behavior suggests the need for HIV intervention programs in the preadolescent and adolescent population. The studies done provided clear evidence of early sexuality. Most Antiguan adolescents do not perceive themselves at risk for becoming infected due in part to the fact that many adolescents particularly young teens are not able to understand the future consequences of their behavior and also due to the perceived perception that AIDS is a disease of the larger developed nations such as the United States.

In addition, Barbados has conducted a KAPB study to assess the knowledge, attitudes, and values of young people in relation to HIV and the gender of human rights dimension of the epidemic. The data collected from the Barbados KAPB research revealed that although the majority of respondents were generally sympathetic to HIV persons; there remained a small proportion that advocated isolation, thereby demonstrating a mixture of fear, ignorance, and intolerance. Such attitudes would need to be addressed through a comprehensive program of education.^[3] Despite having numerous studies conducted in the Caribbean on adolescents and HIV, there has been no such research conducted in the tri-island state of Grenada, Carriacou, and Petite Martinique. It is the intention of the researcher to achieve that purpose. Therefore, this study aims to explore whether adolescent females in Carriacou receive adequate information about HIV/STDs, where do adolescent females receive most of their information on HIV/STDs and whether the knowledge has influenced their sexual behaviors. This study will also focus on how female adolescents feel toward people living with HIV/STDs.

1.1. Unprotected sex among adolescent females can lead to the risk of HIV/STDs in Carriacou

Carriacou which means "land of Reefs" is the most southerly island of the Grenadines, situated 20 miles north of Grenada. It is part of the tri-island state of Grenada, Carriacou, and Petite

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All procedures performed involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. Informed consent was obtained from all individual participants included in the study.

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Martinique with Grenada being the mainland and Carriacou and Petite Martinique its dependencies. Carriacou has an area of 13 square miles with an approximate population of 7528 people.^[5] Carriacou is the largest of the chain of islands between Grenada and St Vincent. There are 2 secondary schools on the island, Bishop College and Hillsborough Secondary School. Hillsborough Secondary will be the focus for this research.

According to a report from the Ministry of Health in Grenada, Family Planning Unit teenage pregnancy in Carriacou^[6] varied over the past 13 years. Between 2000 and 2005 teenage pregnancies increased by 9.7%, from 191 to 233 births, representing 17.1% and 18.3% of total births in those years. Between 2007 and 2010 the number of births to mothers 14 to 19 years fluctuated between 15 in 2007 and 22 in 2008, and was 18 in 2009. In 2010, there were 19 teenage pregnancies, 5 pregnant teenagers tested positive for either HIV or STDs. One pregnant teenager tested positive for HIV, while the remaining 4 tested positive for an STD. In 2011, the number of births to teenage mothers in Carriacou had dropped significantly to 9 pregnancies. However, in 2012 and 2013, there were an increase of 12 and 14, respectively, with 6 teenagers between those years testing positive for an STD and 1 testing positive for HIV. The most common form of STD among the teenagers was herpes.

Furthermore, a report from the Ministry of Health in Grenada, the Grenada National Strategic Plan for Health, 2006 to 2010^[7] indicated that teenage pregnancy and STDs continue to be an issue of concern to health workers. As a means of trying to deal with the HIV/STD epidemic, Grenada has developed a National HIV/AIDS and STD Strategic Plan for the years 2009 to 2015 with a revised version for 2012 to 2016. This plan focuses on enhancing collaboration among the many sectors to achieve universal access to HIV prevention, treatment, care, and support for the population of the State of Grenada, Carriacou, and Petite Martinique.

Additionally, the Ministry of Education in Grenada has implemented Health and Family Life Education (HFLE) program^[8] in the school curriculum throughout all the primary and secondary schools in Grenada, Carriacou, and Petite Martinique. The HFLE is a Life Skills Education program which promotes behavioral change among youths and aim to help young people protect themselves from HIV infection and to safe guard their reproductive health. Life Skill Education is considered a key part of HIV and STD-related education. While HIV/STD education provides information and knowledge, if the ways in which this information and knowledge can be applied to avoid risky behaviors is not provided, then it becomes meaningless. Therefore, the HFLE is essentially a classroom education program that seeks to empower children with knowledge and skills for healthy living, preparing them to cope effectively with the many challenges of life. According to the HFLE syllabus, students at the secondary level in Carriacou are taught about sexuality and sexual health which includes the topic of HIV/AIDS and other STDs, modes of transmission and prevention, and unplanned pregnancy.

1.2. Objectives

This Research Project was conducted to determine the following.

- Whether adolescent females in Carriacou receive adequate information about HIV/STDs,
- Where do adolescent females receive most of their information on HIV/STDs

- Whether the knowledge has influenced their sexual behaviors.
- This study will also focus on how adolescents feel toward people living with HIV/STDs.

The theoretical perspectives for this study focus on the understanding of adolescents' beliefs, knowledge, and behaviors. The first theory is called the Information Provision Model and it simply states that information about HIV and possible ways to avoid it are essential for adopting health-protective practices. Additionally this model contends that there are 3 fundamental determinants of AIDS-risk reduction: information regarding HIV transmission and prevention; motivation to change HIV-risk behavior; and behavioral skills for performing specific HIV-preventive acts.

2. Subjects and methods

Fourteen female adolescents within the age range of 14 to 17 years were selected from Hillsborough Secondary School in Carriacou. These individuals were selected using random purposive sampling from the various forms based on the age range. Padgett^[9] claimed that "researchers use purposive sampling" which is a "deliberate process of selecting respondents based on their ability to provide the needed information."

Every female adolescent throughout the 5 forms who falls within the age range of 14 to 17 years was identified. Gay et al^[10] stated that "random purposive sampling allows for the selection of more participants than needed for the study" (p. 115). A random sample of 14 female adolescents was then selected from such group. Seven female adolescents were selected within the age range of 14 to 15 years and another 7 were selected between the ages of 16 to 17 years. This strategy according to Gay et al adds credibility to the study, although the initial sample is based on purposive selection. The age range of 14 to 17 years was selected because it was a reflection of the peak of the adolescent stage and teenage pregnancy.

2.1. Informed consent and ethics

All procedures performed involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. Informed consent was obtained from all individual participants included in the study.

2.2. Data collection

The data collection technique that was employed with the 2 age groups was the focus group interviews which focused on the understanding, attitude, knowledge, and beliefs in respect of HIV/AIDS and other STDs. There was 1 interview conducted with each focus group and it lasted for approximately 2 h. The discussions were tape recorded with the consent of the group. Morgan^[11] emphasizes the purpose of doing focus group interviews is to bring several different perspectives into contact. Focus group interviews are utilized to understand what people experience and perceived about the focus of inquiry. The researcher is able to find out what participants think, feel, or know about the researcher's focus of inquiry, explore a topic that is new to him or her and participants have an opportunity to listen to each other's contribution, which may spark new insights or help them develop ideas more clearly.

The aim of focus groups is to get closer to participant's understanding of and perspectives on certain issues. The focus group can be used either as a self-contained means of data collection or as a supplement to other methods, depending on how it fits into the overall research plan.

The qualitative researcher brings together relatively small group of people, typically 6 to 8 to find out what they think, feel, or know about the researcher's focus of inquiry. The most important of the group interview is using the dynamics of group interaction to gain information and insights that are less likely to be gained through individual interviews of participant observation.

In a well-conducted focus group interview, people have an opportunity to think aloud about their private perceptions of issues or events, sometimes coming to new understanding through interaction with others in the group. Furthermore, Morgan^[11] believes that focus group interviews are especially useful for investigating what people think and for uncovering why people think as they do which is relevant to understanding risk reduction behavior among adolescents in this study.

Students were asked a series of questions which stimulated a lot of discussions. Many interviewing techniques were employed especially probing, summarizing, and open-ended questions which allowed the researcher to gather in-depth information from the participants. Focus groups were chosen because according to Padgett^[9] they draw on the synergy between members. Focus groups provided information about a range of ideas and feelings that adolescents have toward HIV and other STDs. Krueger^[12] indicated that "the purpose of the focus group is to produce qualitative data to provide insights into the attitudes, perceptions, and opinions of participants" (p. 19).

Focus group allowed for a more interactive group setting where adolescents were free to talk with other group members and share ideas and feelings about HIV/STDs. It also allowed for a more natural conversation to develop among the participants as it lends itself to the stimulation of a dialog. Additionally, it provided the researcher with an opportunity to observe the interactions among individuals with regard to the issue under investigation. Despite these advantages of having a focus group, the researcher had to be very mindful to ensure that all participants in the focus groups were given an equal opportunity to voice their opinions and answer all the research questions. She paid careful attention to the group dynamics and was vigilant at all times ensuring that all the participants regardless of their personality have contributed toward the discussion of the group.

2.3. Analysis

According to Gay et al,^[10] data analysis is an attempt by researchers to summarize collected data in a dependable and accurate manner. Data were collected from written as well as audio tape that was transcribed word for word (verbatim) and verified for accuracy and completeness. Content analysis was carried out by the researcher to analyze the data. Content analysis is defined as a systematic research method for analyzing textual information in standardized way that allows researchers to make inferences about that information.^[13] The data collected was coded and the researcher developed themes based on the specific research questions, such as knowledge, attitudes, and behaviors. Padgett^[9] stated that "coding and thematic development are the

most commonly used analytic procedures in qualitative research" (p. 151). These themes were used as a guide for the focus group interviews. The information collected from the 2 focus groups interview was divided into the following themes.

3. Results

3.1. HIV and STDs-related facts

Students were asked a series of questions pertaining to HIV/STDs. These questions were probed enthusiastically to acquire in-depth information about the issue and to see how much students knew about HIV/AIDS and STDs. The discussion was very vivacious as the students shared willingly their opinions and ideas. Even though some of the students were in disagreement with some of the related facts, the group dynamics allowed for well-informed group discussions. Below is a synopsis of some of the questions that were asked to gather information about how aware and knowledgeable the female students were about HIV/STDs.

3.1.1. Question 1: Can you physically tell if someone is HIV positive or has an STD. In discussing this question, 12 students (86%) indicated that it is very difficult to just look at someone and know whether or not they have HIV or an STD for there are no physical signs. Some people may look very healthy and they may be infected without even knowing that they have the disease. Two students (14%) believed that HIV can be visible in a person who have drastically lost a lot of weight and is sexually active with many partners.

Well what if someone you know was fat is sleeping around with many people and all of a sudden she starts looking skinny and miserable doesn't that indicate the person might have HIV?

The misconception of weight loss being associated with HIV was evident as these 2 students were of the belief that once a person start losing weight drastically and have many sexual partners he or she might have HIV. This misunderstanding needed to be cleared up for it has been identified in other researches done by Kelly et al^[3] who claimed that "a large number of young people believed that HIV infection will show in the appearances of infected persons" (p. 24). To help clarify this ignorance, probing was used with follow-up questions to help the students understand that the person weight loss can be attributed to some other factor in their life. The response received was somewhat shocking as a student said.

Yes it can be but not when the person is sleeping with Tom, Dick, Harry and sometimes Larry and you hear Larry might have it.

Even though these 2 students held the misconception and were of the opinion that drastic weight loss can be used as a clear indication that a person might be HIV positive, they were all in agreement that in order for the virus to spread, an HIV positive individual does not have to look sick or miserable to spread the virus to another individual. Furthermore, all 14 students (100%) were in agreement that with an STD it was much easier to tell physically that an individual had contracted the disease because there is usually a smelly discharge coming from the genital areas of the individual, there may be itching and there may also be sores around that area as well.

3.1.2. Question 2: What are the best means of protection against HIV/STDs? All 14 students (100%) identified that abstinence is the best means of protection against any STD or HIV. However, they indicated that we are living in a world where this word no longer exist for teenagers as they are too exposed to many things that can have an influence on their ability to abstain.

Miss we are no longer living in the stone-age where sex was a taboo, nowadays girls are experimenting early.

This is a clear indication that sex is no longer reserved for marriage. Compared with a generation ago, more adolescents believed that sex before marriage is all right as long as 2 people are emotionally committed to each other. Trends in the sexual activity of adolescents are consistent with their views. It is believed that earlier intercourse is linked to shorter and more sporadic sexual relationships therefore, adolescents are more likely to have multiple sexual partners.

Another means of protection that was identified was the use condoms. All 14 students indicated that condoms can be used to prevent the spread of HIV and other STDs. However, it was interesting to note that more than half of the female adolescents, 8 students (57%) believe that it was up to their male partner to provide the condom. Nevertheless, all 14 students (100%) realized that condoms can burst and they are not 100% safe against HIV or STDs. There were 3 students (21%) who were of the belief that birth control devices such as Intrauterine-devices can help to protect a woman from HIV and STDs. For they believe that these devices can help to stop the virus from travelling through the blood stream of the woman.

3.2. Sources of HIV/STDs information

Data collected during the focus groups revealed that students received information about HIV/STDs through various channels. However, the school system through the HFLE program generated the most responses as 12 students (86%) indicated that they received most of their information about HIV/STDs from the HFLE program. This is of no surprise because during the outbreak of the HIV epidemic in the 1980s, the CARICOM heads of Government have developed a number of youth programs including HFLE, to be taught in the school systems. The HFLE as mentioned earlier is a Life Skills Education program which promotes behavioral change among youths and aim to help young people protect themselves from HIV infection and to safe guard their reproductive health. This program calls upon the school system to take on a more child-centered approach strengthening teacher education to improve the delivery of HFLE throughout the schools in the English speaking Caribbean.

There were 2 students (14%) who indicated that the television and other mass media such as the internet and radio programs have informed them tremendously about HIV and STDs. One student claimed that she had already known a lot of information about HIV and STD before the teacher even taught them.

What the H.F.L.E teacher taught us was nothing new to me. I already knew from watching T.V and going on the computer.

This source of the information was considered to be the main route of knowledge for adolescents in international studies done by Tan et al^[14] and Tavooosi et al^[15] in China and Iran, respectively. These studies found that adolescents received most of their information through the mass media. In the study done by Tavooosi et al^[15] found that only 6% of the students mentioned

“teachers and schools” as the main source of information about HIV. Additionally, in an article entitled “Ghanaian youth attitudes toward HIV/AIDS: The role of HIV/AIDS behavior change communication messages” highlighted that these adolescents got most of their information from the mass media such as television, radio, newspaper, etc.

However, in a Caribbean study done by Avant Garde Media^[16] found that the students received most of their information from the school. Interestingly, in their study, they found that the school was a much more important source of knowledge for female respondents as more than half (51.6%) identified this as their main source of HIV and STD information. Additionally, in another Caribbean study done by Dicks^[4] with Antiguan adolescents found the students received most of their information from within the school setting.

Furthermore, during our discussions the students mentioned that they usually talk to their parents or adult relatives about puberty, sex, HIV, and STDs. This indicated that some parents seem to play a vital role in the delivery of HIV and STDs information. However, it was not as important as I would have expected for students highlighted that their parents are sometimes very uncomfortable when they are asked certain questions and refused to give them an honest and straightforward answer. As a result of this they would prefer to seek information from the HFLE teacher at school.

3.3. Adolescent risky sexual behaviors

Research over the years has indicated that even though young people are quite knowledgeable about HIV/STDs, they show themselves ignorant in ways that could be lethal for them. Having knowledge does not indicate that the behavior of adolescents will be reflected in this knowledge. Boyd-Franklin et al^[17] claimed that “although some adolescents, who have accurate overall knowledge about HIV/AIDS and risk reduction, some continued to take risk in their sexual behaviour” (p. 81). This disparity in knowledge and behavior has been highlighted in our focus group discussions for more than half of the students as many as 10 (71%) have indicated that they had unprotected sex even if it was just 1 time. This information was revealed not openly in our focus group discussions due to the students’ personal issue but was written on a piece of paper and collected by the researcher. This behavior is contrary to the knowledge expressed as all students indicated earlier that the main route of transmission of HIV or STDs is through unprotected sex. Adolescent girls are especially likely to suffer from early risky sex. They are physiologically more susceptible to HIV for they may be less able to negotiate condom use especially in relationships with older men.

Another area in which some students have demonstrated a high level of risky behavior is through having sex with an adult individual. There were 8 students (57%) who indicated such. According to Kelly et al,^[3] the mixing of ages, older men having sex with young women is common in many parts of the region and contributes to HIV rates being higher among young women than among young men belonging to the same age group. The relative vulnerability of young women to HIV infection; make them more likely than young men to become infected. As a result young girls are particularly susceptible to the spread of HIV especially if they are sexually active with more than 1 partner. Data from virtually every country with a prevalence above 1% show that AIDS cases in young women age 15 to 24 are more numerous than those in young men belonging to the same age group.

Furthermore, there is growing evidence that older men are responsible for the increasing share of HIV infections among young women. Some men prey on young women's economic insecurity by rewarding sex with gifts or money, while others resort to sexual abuse and coercion.^[18] Additionally, many girls perceive these men as having power because of their maturity, life experience, and financial resources. The age differential makes young girls more vulnerable to HIV/AIDS because these men are more sexually experienced.

Some students have demonstrated a discrepancy between their knowledge and behavior by having sex with multiple partners. There were 6 students (43%) who have indicated that they had sex with more than 1 partner. Kelly et al.^[3] stated that the UNAIDS has noted that heterosexual epidemic of HIV infection in the Caribbean is driven by the deadly combination of early sexual activity and frequent partner exchange by young people. Convincing adolescents to lower their HIV and STD risk is very difficult. Even when they know a great deal about HIV and STD transmission and the risk of acquiring AIDS, they practice unsafe sex with multiple partners.^[12] Many female adolescents at Hillsborough Secondary are placing their health at risk by having unprotected sex. They need to be better informed and not just know all the facts about HIV/STDs but be able to apply it in their behavior. The education programs must ensure that this is done.

3.4. Adolescent attitudes toward HIV/STD-infected persons

During our focus group discussion, it was revealed that more than half of these adolescent females were sympathetic toward individuals who are HIV positive. There were 10 students (71%) who indicated that they would treat the infected individual no different because they knew they cannot get the virus through casual contact. These students had a high sense compassion and empathy for infected individuals with HIV. They were even more considerate if the infected person was at the same school with them and highlighted that they would demonstrate no ill will toward such individual.

If a person with HIV is around me I will just treat them as a normal individual. I would treat them no different having the virus or not.

I will not make them feel like a nobody, I would talk to them and treat them the same way I treat the other students.

However, there were 4 students (29%) who expressed a stern negative attitude toward individuals who were infected with HIV or have an STD. These adolescents indicated that they would not socialize nor interact with someone who they knew was infected with the virus. They would not even eat from the infected person.

I wouldn't want to be around them at no time, won't have nothing to do with them.

I would keep myself at a distance of that person; I will refrain from sharing items with them.

These negative attitudes were also highlighted by Shiferaw et al.^[19] These researchers found that adolescents who had less knowledge about HIV and STD demonstrated a negative attitude toward HIV positive individuals. However, during our discussion the female adolescents seemed to be well informed and had

adequate knowledge about HIV and STDs. This goes to show that it is not always the students with less knowledge who would harbor a negative attitude toward victims of HIV.

When asked about their attitudes toward their peers with HIV, these few female adolescents went in an uproar. They blamed the individuals for their misfortune and claimed it was their fault because of the life they lived and the risky behaviors they demonstrated not realizing that they too have displayed some element of risky behaviors. They suggested placing these students in a special school and segregating them from the rest of the school population so that they would not have to interact with them. These adolescents claimed that a feeling of uneasiness would be developed which would make such victims uncomfortable because they will be shunned by them. These students demonstrated a level of ignorance, intolerance, and prejudice toward victims of HIV. They displayed a level of selfishness and fear that is believed to be common in adolescents.

3.5. Perceptions about adolescent males behaviors toward HIV/AIDS

The participants in this study demonstrated that how their perceptions and sexual activity were related or influenced by adolescent males. Generally the discussions were around male adolescent behaviors toward the use of condoms, early sexual initiation, and information of young males on HIV/AIDS.

The participants voiced that males were exposed to the same information about HIV/AIDS. They, however, believed that males used condoms only because they think it was important as a form of contraception. However, condom use among males showed generally that they avoided the use of condoms. Although many male adolescents have used a condom at some point in time, comparatively few use them during every act of intercourse. Additionally, adolescent males believed that "being a man" was closely linked to sexual initiation and activity. The participants shared that male adolescents are at risk of contracting HIV through sexual transmission, because a large majority of them engage in sexual intercourse, have multiple partners and fail to consistently use a condom during every act of intercourse.

4. Discussion

The data revealed from this research showed that female adolescents were highly aware of HIV/STDs-related facts. They were knowledgeable and have received adequate information about HIV/STDs. In some instances, all 14 students (100%) were able to correctly answer and identify facts associated with HIV and STDs. This was an indication that these students were receiving reasonable information about such topics. However, there were a few instances where some misconceptions prevailed, which indicated that these students had ambiguous or misleading information regarding HIV/STDs. Nevertheless the majority of female adolescents seem well-informed about HIV/STDs.

Moreover, the school system seemed too have played a vital role in disseminating information to these adolescents as more than half of the students (86%) indicated that they have received most of their information about HIV/STDs from the school setting through their HFLE programs. It is believed that school-based prevention programs can help to reduce unprotected sex among teens. Schools provide a very important point of access to most adolescents in the Caribbean since over 85% attend elementary and secondary schools.^[4] Additionally, it can be argued that HIV/STDs education through the HFLE program at

school is critical for adolescents since it provides them with information before they become sexually active and potentially engage in risky behaviors such as unprotected sex. For adolescents who are already sexually active such education can also help protect them through providing the necessary information and knowledge about where and how to seek help, information, and services such as testing and counseling.

Although the HFLE program at Hillsborough Secondary school is imparting knowledge about HIV/STDs, this knowledge does not appear to predict a reduction in sexual behavior in adolescents. Despite having knowledge about HIV/STDs, the data indicated that these female adolescents were engaging in risky sexual behaviors that could place their health in jeopardy.

Having accurate information and a wide variety of knowledge about HIV/AIDS and STDs prevention through the HFLE program does not necessarily guarantee a reduction in high-risk behaviors as seen in the reports and highlighted in this research. As revealed in the research 71% of the female adolescents indicated that they had unprotected sex, even if it was just 1 time; 57% had sex with an adult individual and 43% had sex with more than 1 partner. Unfortunately, female adolescents often do not modify their behaviors based on their knowledge because they failed to personalize that knowledge. The failure of HIV/STDs education through the HFLE program to change high-risk behaviors may also be attributable to other factors. Female adolescents are notorious for believing in their own immortality and as a result they may not take the need for precautions seriously. Barnett and Whiteside^[20] stated that “it is increasingly recognized that knowledge is not enough. Most young people are aware of HIV/AIDS; the problem is they do not see themselves at risk” (p. 358). Therefore, strategies need to be developed that would be able to help students alleviate their high-risk behaviors.

Furthermore, there is a need to move beyond individual awareness of HIV/STDs to an appreciation of the importance of a risk environment adolescent are placed in. For this reason, audio-visual materials may include interviews with young people who have HIV or an STD in order to emphasize to adolescents that they are at risk. Furthermore, an effective HIV/STDs prevention curriculum must include an emphasis, particularly for girls on one’s right to resist the demands of others that one engages in dangerous behaviors. Role playing in stimulated high-risk situations particularly for girls can serve to reinforce self-protective assertive behaviors. Too often preventative education programs focus too early on the knowledge, attitudes and skills involved in immediate, physical sexual practices without striving to embed these in a more holistic approach that takes account the roots of adolescents’ behaviors.

Sexual behaviors in girls are understood in the context of a society that socializes female to yield to the demands and desires of those in authorities primarily the men. Sexual activity in adolescent girls can be seen to be simply the fulfillment of what these girls perceive to be their social role. This may also account for the fact that even among those adolescent girls who have accurate information regarding reducing the risk of HIV and STD infection, there is a failure to use protection.

With regard to adolescents’ attitudes, most adolescents (71%) demonstrated a positive attitude toward individuals with HIV/STDs and felt a sense of compassion toward such victims. However, there were a few students (29%) who felt negatively toward such persons and had no care and consideration for such individuals affected by the virus. These students demonstrated a lack of compassion and displayed a high sense of ignorance. What was interesting was the fact that these adolescents seemed

to be well informed about the transmission of the virus during our discussion. Nonetheless, they have remained rooted in the ideology that having HIV is a death sentence and if you associate with such individuals you will acquire the virus to. As a result these adolescents claimed that they would refrain from any contact with such persons. The research has shown that these adolescents blame the victims for their misfortunes and believed it was their fault because of their behaviors that these persons acquire the deadly disease. As a result of this discrepancy between adolescents’ knowledge, behaviors, and attitudes, well-constructed and well-delivered education has to be implemented and delivered in such a way that it would promote the positive attitudes and behaviors that avoid risk and manifest care and support in adolescents. Institutional systems are challenged to do something about HIV/STDs by imparting knowledge and fostering positive attitudes and behaviors that would protect adolescents against this infection and diseases. The education sector has a major role to play in ensuring that students acquire the necessary information that would help them avoid risky behaviors and develop positive attitudes that could reduce their risk of infection. Conclusively, by doing this research, the researcher is now able to better prepare adolescents for the world and help them protect themselves and others around them thus lowering the rate of teenage pregnancy and HIV/STDs victims in the small island of Carriacou.

The HIV/STDs epidemic is one that is growing rapid around the world. In many Caribbean islands, the fastest growing group of HIV/STD positive individuals is teenage females.^[21] In some countries among youths 15 to 25 years, “the female to male ratio of new HIV infections is as high as 6:1”. The increase in these numbers can be seen as a lack of education and awareness. In the country of Carriacou we have seen an increase in the number of teenage pregnancy which can lead to an increase in the number of persons suffering from HIV and other STDs. With this growing rate, there is an urgent need for interventions that will provide adolescents with information, the ability to make informed decisions and the assertiveness and communication skills required for effective HIV/STD prevention and risk-reduction.

It is recommended that the school focus more on behavioral change mechanisms in reducing adolescent’s risk of HIV/STDs and less on just route knowledge. Barnett and Whiteside^[20] stated that “behavioural change interventions do work as long as they are maintained” (p. 86). Furthermore, Kelly et al^[3] indicated that the standard approach to HIV/AIDS control has been to promote behavioral change and the adoption of skills that will reduce the likelihood of HIV infection. These behavioral interventions include adolescents adopting safe sexual behaviors such as using a condom every time they have sex and limiting the number of sexual partners as well as having regular testing and counseling for HIV/STDs.

Another recommendation is that the schools should begin sex education at the primary level.

In general, schools at the primary level does very little to help students develop behavior patterns for the responsible management of their sexuality. However, the most difficult problem is deciding at what grade level to introduced detailed sexual information regarding such subjects as transmission, condoms usage, and sex. As a result, these issues are often not presented until in form 4 or 5 of secondary schools. Unfortunately, because of the realities of adolescent sexuality, this may be too late. The fact of pre-teen and early-teen pregnancy confirms the need for HIV/STDs education in the lower grades.

Students need to be introduced to HIV education programs while they are still very young, especially before they enter the period of puberty. Therefore, it is recommended that students should be introduced to HIV/STDs preventive education no later than middle primary school. However, whatever is presented to the students must be appropriate to their age and their developmental level. Nevertheless, there might be many parents who are against the introduction of HIV/STDs education at an earlier stage in their child's development for fear that it might lead students to increase sexual behaviors and experimentation. Onyechi et al^[22] highlighted in their research that there is a need of follow-up studies from the other parts of the country to reduce the HIV risk specially among those with high-risk behavior.

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