Knowledge, Attitudes and Practices (KAP) Survey of Corozal District Youth between the Ages of 16 and 21 Years

Authors:

J. Briceño-Perriott, PhD

University of Belize

Martin Cuellar, PhD

National AIDS Commission

Allison Green

National AIDS Commission

Neidi Rosado

Department of Youth Services, MOEYS

Nayely Moreno

National Drug Abuse Control Council

Lourdes Heredia

Ministry of Health

Forward

In the Summer of 2012, the NAC/CCM Corozal Committee decided to apply to the American Embassy for an Ambassador's grant to conduct a knowledge, attitude and practice (KAP) study on young people in the Corozal District between 16 and 21 years of age. The Committee realized that although there are several recent studies that provide information on knowledge and practice, no such study has been done exclusively in any of the districts. In addition, the Committee was interested in finding out extra information on sexual practices that could provide detailed insight into the opportunities for targeted prevention interventions. The application for grant funding was successful and over the ensuing months the Committee created a Research Implementation Team comprised of the representatives from the Infection Control Office of the Corozal Community Hospital, the National Drug Abuse Control Council, the Department of Youth Services and the Laboratory of the Corozal Community Hospital. The team quickly developed a partnership with the University of Belize to conduct the study. The University participation came from Research Professor, Dr. Jean Briceño- Perriott who served as the lead investigator on the Research Implementation Team. The research team was given further technical support from the Secretariat of the National AIDS Commission.

The team worked along with other members of the NAC/CCM Corozal Committee to collect data and to enter the data before analysis could be done. The lead investigator conducted the analysis and provided the resulting graphs and narrative. The team discussed the results and developed recommendations which will guide its prevention initiatives over the next two years. This research project could not have been successful without the kind support of the American Ambassador's HIV Grant Program. In addition, the members of the research implementation team were vital to its success. Special recognition is given to the outgoing chairperson of the Committee and the incoming Chairperson who both gave their full support throughout the process. In addition accolades are due to Mr. Henri Castillo, member of the committee for his invaluable assistance during the data entry component of the study.

The National AIDS Commission is very proud of the stellar example this study provides to other district committees around the country and looks forward to the results improving the evidence-based interventions by that committee.

Contents

List of Tables & Figures

Executive Summary

The general objectives of this Knowledge, Attitudes and Practices (KAP) Survey of Corozal District 16 to 21 year old youth were to assess the extent/scope of HIV knowledge, identify attitudes related to HIV, identify (a) sexual practices and (b) characteristics of non-sexually active young people and assess levels of risk in sexual behavior related to HIV. The target population was divided into two sub groups: (a) youth 16 to 21 years pursuing studies at Corozal District high schools (third and fourth years) and tertiary level institutions (in school youth); (b) Corozal District youth 16 to 21 years not currently pursuing formal educational studies (out of school youth). Not all school authorities allowed participation in the study and of the schools that were allowed participation, a small number of parents gave permission for their underage children to participate. The same occurred for out of school youth.

Hence, only 384 of the completed questionnaires met inclusion criteria. Of these 271 reported attending high schools or sixth forms, 104 reported not being in school and 9 did not report their education status. The average age of the participants was 18.28 years with the in school respondents' average age (18.16) below the sample population's mean and the out of school youth's average age (18.64) above the sample population's mean. More than half the youth (59.9%) were female while 40.1% were male.

Results also indicate that of the total respondents, 1% had no general HIV knowledge, 3.1% had low knowledge, 57.6% had medium knowledge and 38.3% had high knowledge. Further the data shows that the majority (69.0%) had high knowledge of HIV transmission. Indeed this was true for both the in school group (73.3%) and the out of school group (57.3%). Although knowledge of HIV transmission was good, there were some misconceptions regarding non transmittable routes. These most common misconceptions included that HIV could be transmitted through:

1. Sharing a toilet with an infected person(35.3%; *n*=377);
2. A mosquito bite (41.7%; *n*=376);
3. Obeah, curanderos or other supernatural means (30.1*%; n*=377).

The respondents' attitudes towards people living with HIV and AIDS were found to be accepting and positive (87.7%). However, approximately one third of the sample population reported that they would feel uncomfortable sharing a toilet with a person living with HIV/AIDS

(37.8%) or buying food from a vendor if they knew the vendor were HIV positive (39.2%). Further analysis disclosed a significant statistical link with formal education in all three knowledge and attitude indicators.

A little above a third of the respondents (38.5%) reported not being sexually active, 58.1% admitted to being sexually active and 3.4% did not respond to this question. Of the respondents who were not sexually active, 55.3% felt they were not ready for sex, 58.4% were afraid of getting pregnant, 31.1% had not had the opportunity and 60.5% felt it was morally wrong to engage in sex before marriage. However, the majority reported abstaining from sex because of fear of contracting the HIV virus (77.6%) and getting other sexually transmitted diseases (70.6%). A majority of the non-sexually active respondents planned to wait until marriage to become sexually active.

Sexually experienced respondents reported first intercourse at a mean age of 16.3 years. On average sexual partners at first intercourse were three years older than the respondents with in school youth reporting slightly younger partners with a mean age of 18.7 years compared to 19.4 years for out of school youth. A majority of respondents identified sexual partners as either a boyfriend (46.9%) or a girlfriend (28.8%). There was little variation between in school and out of school youth in these indicators. Further, 28.9% reported their first sexual experience occurring at their home, 26.9% at their boyfriend or girlfriend's home and 20.4% at a motel or hotel. A small percentage reported first sexual partners as one night stands (11.9%) or commercial sex workers (2.2%). Only in school youth (2.7%) reported coercive first sexual experience.

There is little variability in first experience, lifetime and current sexual experiences. However, the data does reveal 8.8% of the sexually active respondents have undergone some form of forced sexual encounter in their lifetime. This is a higher percentage than that reported for first sexual experience (2.2%). Condom use decreases from 60% at first sexual experience to 32 % currently (in the last 12 months). Homosexual sex occurred at first experience (9 males with males with 2 coerced experiences; 1 female with female), in the last twelve months in the oral sex category, 11 males have had oral sex with male partners and 6 females have had oral sex with female partners. In the anal sex category, 10 males had male partners and 1 female has had a female partner in the last 12 months.

Incidence of vaginal sex has increased compared to the lifetime category while incidence of oral and anal sex has decreased for the last twelve month category compared to the lifetime category. Further 53.1% of the respondents who reported vaginal sex, reported oral sex and 18.4% also reported anal sex and vaginal sex. Less than a third (28.5%), a smaller percentage than in the lifetime category reported only vaginal sex.

Unprotected vaginal, oral and anal sex, multiple sexual partners and sexual activity under the influence of licit and illicit drugs are sexual behaviours/practices known to increase the risk for HIV (Homma, Nicholson, Saewyc, 2012; Tenkorang & Matica-Tyndale, 2008). Therefore, in the current study these were the indicators used to measure level of HIV risk. Data analysis suggest that respondent's sexual practices place 15.1 % at low risk for HIV, 80.1% at medium risk for HIV and 4.8% at high risk for HIV. Further analysis indicates that there are no significant differences (χ^2 [2, 184] =2.321, p = .313) in level of risk for in school and out of school youth. Hence medium to high knowledge of HIV transmission and prevention do not translate into behavior change (safe sexual practices) for sexually active Corozal District Youth.

Introduction

The National Strategic Plan to guide Belize's response to HIV from 2012 to 2016 (NSP) identifies several key reasons for the transmission of HIV in Belize. The primary factor is identified as inconsistent condom use in the presence of multiple sexual partners. Secondary factors are identified as early sexual initiation, transactional sex and gender-based violence. This analysis of the cause of transmission is validated by empirical evidence produced through recent scientific studies (NAC, 2012). The Multiple Indicator Cluster Survey (MICS) completed in 2012, the Behaviour Surveillance Study (2011) and the Ministry of Labour Workforce Survey (2012) all show low consistent condom use that average 30% among youth and adult populations. The MICS shows high levels of infidelity across the country ranging in proportion from 20% to 60% of marriages and common law unions. In addition, the Mother and Child Health Unit in the Ministry of Health reports alarming statistics that describe sexual health among young women. The Unit reports 25% of neonatal deaths occurring to babies born to mothers under the age of 20. Similarly, 25% of babies born with low birth rates are born to mothers under the age of 20. In addition, of all babies born in country, 25% are born to mothers under the age of 20 and finally, 16% of all abortions are to young girls under the age of 20.

These figures underscore the vulnerable behaviours that support HIV transmission in Belize. Any discussion of adequate responses must be anchored in behavior change methodologies which themselves must respond to the nuances of vulnerability. The National Operational Plan (NOP) that lays out the activities that the country will implement to breathe life into its strategic plan for HIV, identifies four (4) key strategies to end new infections. These are: Establish systems to produce and sustain a national profile of transmission to guide prevention interventions, remove barriers to getting tested, and implement socialization programs to mitigate negative cultural norms that increase the risk of HIV transmission such as those that facilitate gender-based violence and design cutting-edge, evidence-informed interventions for sexual behavior change, especially among identified vulnerable groups. To be able to make best use of these strategies the national response is charged with gaining as detailed a picture as possible of the cultural, values driven and practical behaviours of those most at risk to be able to catalyze the behavior change needed to reduce their vulnerability.

These researchers, therefore, investigated in great detail the sexual knowledge, practices, attitudes and risk of young people from 16 to 21 years of age in the Corozal District. Results provide all concerned with data describing gaps of knowledge, levels of tolerance, attitudes toward safer sexual activity, levels of risk in current sexual activity and a clear definition of the type of sexual practices of the target population. With these results the agencies, government departments and organizations working in the national response are able to capture the exact point where this target group lies on the scale of behavior change as well as identify the interventions that carry the greatest potential for success. The impact of this study then is to inform the prevention agenda of the country and help the national response to achieve its stated goals for prevention. The results also serve as a new standard of comprehensive collection of sexual data which can then be replicated in the other districts on an ongoing basis to feed prevention initiatives.

The report is divided into four chapters. The first chapter develops the theoretical framework that contextualizes the investigation, describes the problem being addressed, the research questions, and justification for the study. The second chapter details the study's objectives, the design of the study, the location, the target and sample population, the criteria for inclusion and exclusion, the variables of the study, the procedure for data collection, data analysis, and ethical considerations. The third chapter delineates the study's results and the fourth chapter presents the discussion, conclusion and recommendations. The references, appendices, which include the letters of informed consent and the questionnaire, are also presented.

CHAPTER 1

Background

1.1 Theoretical Framework

The analysis of the relationship between knowledge of HIV and its impact on sexual practices requires consideration of many factors that have given the epidemic a specific course in Belize, including economic, social, historical, cultural and political factors. Models and theories that have been developed for the study of risk behaviors such as risky sexual behavior provide useful information for understanding this behavior within the context of the individual. Thus the following theoretical constructions will be used as a framework for the current study: Health Belief Model (HBM), Theory of Reasoned Action (TRA), Social Cognitive Theory, HIV/AIDS Reduction Mode and the Transtheoretical Model of Change (TTM).

The Health Belief Model (Rosenstock, 1975 as cited in Diclente & Peterson, 1994) is one of the most widely used health psychology theoretical frameworks for understanding risky behavior in sexual health. It involves cognition as a predisposing factor for the adoption of habits, and it considers behavior as a result of the array of beliefs and internal appraisals that the subject brings to a given situation.

HBM is a value expectancy theory built on the principles that individuals differ in two aspects: the first is in the way they perceive the personal benefits or the value of preventing disease or restoring health, and second, the expectation that a specific measure can prevent the disease. It is more likely that people take steps to prevent or control a health condition in the following circumstances if:

a) They regard themselves as susceptible to the condition
b) They believe it to have potentially serious consequences
c) They believe the course of action can reduce the susceptibility and seriousness
d) They believe the costs of the action are outweighed by its benefits

The fundamental concepts of this model are:

a) Perceived vulnerability, the perception of the probability of the meaning of a health problem.

b) The perceived seriousness, opinions about how serious the consequences are.
c) The perceived benefits, that is, perceptions of the effectiveness of the recommended measure (abstinence, condom use) with regards to reducing health risks.

Other variables are related to demographic, socio-psychological and structural factors that can affect the perception of an individual, and thus indirectly influence health behaviors. Specifically, socio-demographic factors, including education are believed to have an indirect effect on behavior, due to the influence of perceived susceptibility, severity, benefits and barriers.

Another theoretical model is the Theory of Reasoned Action (Ajzen & Fishbein, 1980 as cited in Fishbein & Ajzen, 1981) which holds that the immediate determinant of behavior is the intent of the individual to engage in such conduct. Behavioral intentions are a function of: (1) the attitudes of people towards behavior, determined by the belief that the behavior produces positive or negative results and (2) the subjective norms, shaped by the perception of value that other significant persons grant to the behavior, and by their motivation in meeting those standards. This theory states that the attitude towards experimentation is determined by each of the beliefs that the person holds regarding them and the positive/ negative evaluation made around each of those beliefs.

The third framework is Bandura's (1986 as cited in Bandura, 1999) Social Cognitive Theory which states that the environment determines our behavior. The theory sees the learning process as a social process influenced by interaction with others. In social cognitive theory, the social and physical environments influence the formation and reinforcement of beliefs that determine behavior. A change in any of these three components- behavioral, physical or social has an influence on the other two. The environment causes behavior but behavior also causes the environment, defining this concept as reciprocal determinism: the world and the behavior of a person cause one another. Later, Bandura argued that personality is an interaction between three principles: the environment, behavior and psychological processes of the individual. He considered self-efficacy to be an essential component of the theory, namely that the person believes that he/she feels able to put the new behavior into practice when the opportunity arises.

The fourth model, known as the of HIV / AIDS Risk Reduction Model (Catania, Kegeles & Coates,1990 as cited in Brecht et al., 2007), incorporates some variables from other theories of behavioral change, including several of the health belief model, such as personal effectiveness and theoretical knowledge of interpersonal processes. As the framework of the stages of change, the HIV/AIDS Risk Reduction Model postulates a sequence of three stages of change: (1) the recognition and characterization of the principle of the behavior as high risk; (2) the commitment to reduce high-risk sexual contacts and increase low-risk activities; (3) action, which is subdivided into information seeking and obtaining remedies and implementation of solutions.

The variables that influence the progression of these stages include:

a) Knowledge of sexual activity associated with HIV transmission
b) The belief in personal vulnerability, and the view that AIDS is undesirable
c) Costs and benefits of action
d) Personal effectiveness in relation to knowledge and the desirability of good health and pleasure of sexual practice
e) Social networks and assistance in solving problems
f) Self-esteem
g) Verbal communication of the individual with his/her partner

The fifth model called the Transtheoretical Model of Change (TTM) developed by Prochaska, DiClemente and Norcass (1992) highlights the complex, interconnected, mental processes that are necessary for behavior change to occur. The TTM identifies five stages of change along a continuum: pre-contemplation, contemplation, preparation, action and maintenance. The theory goes on to explain the processes that guide a person through these stages. The authors identify ten processes, the first five being cognitive and/or experiential. These are consciousness raising, dramatic relief, environmental evaluation, social liberation and self-reevaluation. The second five processes are behavioral in nature and include: counter-conditioning, helping relationships, reinforcement management, stimulus control, and self-liberation. This theory is used in counseling young people because of its easy application of the counseling process. A client-focused counselor can empower a young person to move

through the stages of change by facilitating or catalyzing the mental and behavioral steps that they must go through to accomplish their behavior change goals (Vega, Maddaleno & Mazin, 2005). A closer look at the processes involved in behavior change unveil the opportunities that are available to Belizean health educators to use the TTM to facilitate positive change among young people's sexual activity. In addition, the theoretical behavior patterns explained in the TTM have guided and can guide studies like the current KAP study to glean more relevant information from respondents based on the value of the responses in plotting the levels of risk, intention for change and mitigating factors to risky behavior among youth.

In the first process of raising consciousness, the young person seeks to increase his or her knowledge (Vega, Magdaleno & Mazin, 2005). The current KAP study included questions to help identify young people's current knowledge about sexuality and safe sex as well as their interest in getting more information. The second process of dramatic relief describes the young person's realization of their risk level (Vega, Magdaleno & Mazin). This study can help the national response to identify just how many young people in the Corozal District are at going through this process. Environmental evaluation is the next process young people go through when seeking behavior change. In this process the young person considers the impact of his or her actions on others around him or her and serves as one more way for researchers to evaluate the overall knowledge and attitude of young people toward risky sexual behavior. In the next process, social liberation, the young person starts to identify his or her options for reducing risk and starts to add value to these options.

In similar manner the KAP study included questions to help identify the values that young people in Corozal place to safe sex activities to help prevention educators know which risk reduction options to market to the target populations. The fifth process is self-reevaluation and entails the young person assessing how he or she feels about him or herself in relationship to a problem (Vega,Magdaleno & Mazin, 2005). This process has not influenced the development of this study. The next five processes in the path to behavior change are more applicable to the young people who are already well on the road to behavior change and therefore was not used to inform the questionnaire in this study.

1.2 Current Studies

This literature review ends with a synopsis of studies on knowledge, attitude and sexual practices among youths to highlight the importance of this current study. Survey data on sexual practices among Northern Thai people from Northern Thailand aged17 to 20 years indicate that sexually active young people frequently engage in or are subjected to risk-taking behaviours that may expose them to sexually transmitted diseases or unwanted pregnancies. These behaviours include having multiple sexual partners and frequent partner turnover. High percentages also engage in unprotected sexual intercourse with various sexual partners that include steady, casual or paid. Young women also reported often experiencing sexual coercion (Tangmunkongvorakulo et al., 2011). These sexual practices have also been correlated with HIV exposure.

Tan et al. (2007) assessed Chinese students' knowledge, attitudes and practices on HIV and AIDS. They found that the majority of undergraduates had a moderate level of HIV and AIDS knowledge, acceptance and attitude towards people with HIV and AIDS. Males had more acceptance and positive attitudes towards people living with HIV and AIDS than females.

Rampal, Mohammadi, Abdullah and Rahman (2010) conducted a similar study to Tan et al.'s study. However, their sample comprised of adolescents; a cross-sectional study with randomly selected secondary schools in the Klang district of Malaysia. They found that overall knowledge about HIV/AIDS transmission was low and misconceptions existed regarding prevention. Only 3.6% of the respondents had sound knowledge. Additionally respondents seemed to have discriminatory and intolerant attitudes towards people living with HIV/AIDS.

A minority of students (3.6%) reported having experienced sexual intercourse and 27.9% reported that their first sexual experience was coerced. The overall mean average for first sexual intercourse was 14.8 (95% CI 14.5-15.1) years. The difference in age of first sexual experience between males and females was statistically significant. Only 42.2% stated that they had used a condom during last sexual experience and 16.3 % reported that they had consumed alcohol before having sex.

Most recently, a cross-sectional study was conducted among high school youth in Addis Ababa, Ethiopia using a multi-stage sampling procedure to determine prevalence and pattern of oral and anal practices among high school youth (Cherie & Berhane, 2012). Five point four percent (5.4%) of the 3840 participants reported ever having oral sex and 4.3 % reported having anal sex in the last year. Of those reporting practicing oral sex, 61.2% reported having multiple partners and of those reporting practicing anal sex, 51.1% had multiple partners. Reasons reported for oral and anal sex included prevention of pregnancy, reduction of HIV and sexually transmitted infections and preservation of virginity. The current study addresses similar issues investigated in the literature reviewed in this section.

The Belize Multiple Indicator Cluster Survey [MICS 4] (SIB & UNICEF, 2012) provides statistically sound estimates of a range of indicators in the areas of health, education, child protection, water and sanitation and HIV and AIDS. The survey provides information on the prevalence of child mortality, stunting, wasting, underweight, and obesity; breastfeeding and supplementary feeding practices, including the immunization status of children. A closer look at the results that speak to youth and HIV help describe the Belizean landscape in which the Knowledge, Attitudes and Practice (KAP) study took place. There are five major indicators that are relevant to the current KAP study. The first indicator is comprehensive knowledge about HIV which includes having heard of HIV, knowing that the two most common ways of protection against transmission are limiting sexual activity to one negative partner or using a condom consistently. Only 42.9% of young women between 15 to 24 years of age demonstrated comprehensive knowledge of HIV transmission, slightly less than older women who had a comprehensive knowledge rating of 45.7%.

On the second indicator which measures the ability to identify the most common misconceptions about HIV in Belize, 59.7% of women aged 15 to 49 identified the two most common misconceptions which are that HIV can be transmitted by mosquitoes or by supernatural means. The MICS also studied the levels of acceptance of people living with HIV among women across the country. The results show that the national average is very low, less than 24%. Younger women, between 15 and 24 years of age, reported less accepting attitudes toward people living with HIV than women over 25 years of age and rural women reported less accepting attitudes than their urban counterparts. The MICS also reports the willingness of young women to get an HIV test and receive their results. The researchers of the current KAP

study are very interested in this information from the young respondents in Corozal to be able to compare the Corozal reality to the national results. The MICS results show that younger and rural women are less likely to collect the results of their HIV test than women above 19 and those from urban settings. The rate of collection of HIV test results for Mayan women was low at 23.5% especially when compared to the rate for Garifuna women reported at 56.8%. Since there are many Mestizo and Mayan women in the Corozal district, the researchers considered it interesting to see how this study's data which also included male respondents compared to the MICS results.

The MICS also included a module of questions targeting young women between 15 and 24 years old to assess their current sexual risk for contracting HIV. The risk factors included early sexual initiation, sex with older male partners, sex with non-affective partners and sex without a condom. The results provide a picture which allowed comparison for this KAP study. Relevant markers in the national profile of risk are: In the age group 15 to 24, 68.7% of young women report not having had any sexual activity. This percentage varies between urban and rural women with 59% of urban women reporting no sex and 78.5% of rural women reporting no sex. Sixteen percent of women in this age range report having had sex with men ten years their senior in the last 12 months. These indicators reported on in the MICS of 2012 play a significant role in defining the national landscape of sexual practice and risk. This KAP study used similar questions to allow the prevention interventions in the future to show similarities and differences between sexual behavior in youth in Corozal and those of the rest of the country. These questions also allow social researchers to better define the levels of risk among Corozal youth.

During 2011 and 2012 the University of Del Valle in Guatemala conducted a behavioural seroprevalence study (BSS) in Belize to provide a better understanding of the behaviours that promote HIV transmission and help identify the most risky behavior among those considered to be most vulnerable to becoming infected with HIV. The study identified the prevalence of HIV and other sexually transmitted infections (STIs) among three main vulnerable populations in Belize, men who have sex with men (MSW), commercial sex workers (FSW) and persons with HIV (PWHIV). The study also identified sexual risk in each of these populations. Since this was the first study to assess the seroprevalence in the two most vulnerable populations, MSM and FSW, the results of this study allow the calculation of the most accurate picture of HIV transmission in Belize to date. The results show that FSW have a 0.91% prevalence of HIV and

MSM have a 13.5% prevalence of HIV. All three populations covered in this study report low consistent condom use; MSM 31%, FSW 31.9% and PWHIV 40% (females) and 67% (males). The BSS also reported the median age of first sexual intercourse; among PWHIV the average was 16, among MSM it was 15 and among FSW the average was 15 and the average age of starting to have sex for money was 20. In addition, the BSS allows valuable insight into the role that coercion plays in sexual risk among young people. In the case of FSW, 40% report having been forced into sex at some point in their lives while 13% report that their first sexual experience was coerced. In MSM 33% report having been forced into sex at some point in their lives while 8% report that their first sexual experience was coerced. In the case of PWHIV 10% of men reported having been forced to have sex at some point in their lives while 23% of women report the same (Manzanero et al., 2012). Recognizing the high prevalence of HIV among MSM, the current KAP study was designed to determine the amount of sexual activity taking place between men in the Corozal district to be able to make comparisons to the national average and to guide targeted prevention initiatives.

The Mother and Child Health Program in the Ministry of Health provides annual data on key markers for sexual and reproductive health. The latest report produced by the MCH Unit includes key statistics that reflect limited if not poor access or assimilation of sexual and reproductive information. There are direct correlations made between levels of formal education, access to sexual and reproductive health (SRH) information and sexual vulnerability. Evidence of the relationship include high levels of teenage pregnancy, high levels of unwanted abortions, high levels of teenage births, high levels of repeated teenage pregnancy and high levels of neonatal deaths to babies of mothers under 18 years of age (Beer, 2013). This alarming indication of a need for more SRH education for all young women justified the inclusion of questions in the current KAP study to help identify the levels of knowledge and risk in the Corozal District. The fact that these national statistics are being observed by local public health and maternal health nurses in Corozal deepened this justification (V. Sheppard, Mother and Child Health Nurse, Corozal Community Hospital, personal communication, February 28, 2013).

1.3 Statement of the Problem

The National Strategic Plan (NSP) for Belize's response to HIV identifies three pillars of focus that drive the national response. In the pillar to end new HIV infections the plan calls for the national response to revolutionize and engender evidence-based and targeted social and behavior change programmes. In addition, the NSP identifies the following three problems as instrumental in continuing the transmission of HIV in Belize, (a) Limited sexual behavior change, (b) Machismio and socio-cultural norms, (c) limited knowledge of HIV status and (d) the influence of drug and alcohol abuse (National AIDS Commission, 2012). This analysis reiterates health problems observed by public health professionals around the country (V. Sheppard, Mother and Child Health Nurse, Corozal Community Hospital, personal communication, March 12, 2013). In Corozal, the National AIDS Committee is determined to approach its new interventions for prevention based on updated scientific description of the sexual knowledge, attitude, behavior, and risk of the most vulnerable populations. Since there have been other studies such as the BSS and MICS that have studied the knowledge, attitudes and behavior of other vulnerable groups, the Committee was interested in gaining this vital sexual profile of risk for HIV transmission for young people between the ages of 16 to 21 years in Corozal.

The researchers, therefore, sought to answer the following questions:

1.3.1 Central Research Questions

- What knowledge do young people 16 to 21 years of age in the Corozal District have of HIV?
- What are young people's 16 to 21 years of age in the Corozal District attitudes related to HIV?
- What are (a) the sexual practices of active and (b) characteristics of non- sexually active young people 16 to 21 years in the Corozal District?
- What is the level of risk in sexual behavior related to HIV in young people 16 to 21 years in the Corozal District?

1.4 Significance

A majority of youth programs that exist in Belize are centralized in Belize City. Few of these programs are provided for out district youth whether urban or rural. In the Corozal District there are limited opportunities for youth to participate in age and culturally appropriate youth programs that can increase their skills for a complete enjoyment of a safe Sexual and Reproductive Health.

The last national KAP study on youth was done in 2009. The MICS 4 (SIB & UNICEF, 2012) covered questions on attitudes of young girls toward HIV. The result is that we still have a national deficit of information on the sexual attitudes, practices, knowledge and risk of young people 16 to 21 in our districts. A comprehensive KAP study like the current study will shed light on key components of youth sexual practices, attitudes and behaviours that the national response has not been able to study to date. Results of the current study would aid in the multi-sectoral drive towards a productive youth SRH and Education response leading to the reduction of HIV infections both locally and country-wide.

The fact that these initiatives will be more empirically-targeted and responsive increases the chances that more youth will be impacted in positive ways especially to increase their capacities and motivation to develop personal protection plans that will protect them from contracting the HIV/AIDS virus. In addition, for the first time, the entire national public will be able to access accurate data on Sexual Knowledge, Attitude and Practice of in and out of school youth in the Corozal District. This then can be replicated throughout the other districts and islands of Belize to get a bird's eye view of youth sexual attitude and behaviours in the country leading towards truly empirically-driven strategic planning for disease reduction.

1.5 Justification

The knowledge of the context in which risky sexual behavior, attitudes and knowledge are developed in relation to HIV acquisition and prevention, the central objectives of this study, is a prerequisite for the organization, planning and development of effective and sustainable intervention and prevention strategies so that this epidemic can be addressed through effective reduction of specific vulnerabilities. It involves developing and facilitating interventions and prevention strategies that integrate major stakeholders in Belize, in the present case, the Corozal

District youth between the ages of 16 and 21 years. It is widely accepted that research provides strong evidence to guide intervention programs and health policies (Saewyc, Taylor, Homma, Ogilvie, 2008) as well as provide information to evaluate such strategies designed to improve sexual and reproductive health (Mercer, 2011); thus, the justification for the present study. Indeed in 2012, the country benefitted from new studies which results unveiled the current picture of how HIV is transmitted in Belize and what should be Belize's new focus in vulnerable sexual behavior such as youth and men who have sex with men [MSM] (Manzanero et al., 2012).

In the discussions that flowed from the launch of the results of these studies, the national response looked forward to conducting follow up studies to help fill in the details in Belize's national vulnerability profile. This research study is intended to be one of the follow up studies with a focus on a specific population youth in the Corozal District between the ages of 16 and 21 years. Current empirical evidence for this population is limited. Indeed, there is a lack of detailed strategic information on youth knowledge on Sexual and Reproductive Health (SRH) inclusive of HIV/AIDS as well as their attitudes and sexual practices. Data collected through this study would greatly catalyze a healthier productive youth SRH and Education response from those responsible for the reduction of HIV infections in the Corozal District. Additional benefits can be realized by the Ministry of Education as this unique study will expose specific gaps in knowledge and favorable attitude which the Ministry can then respond to with its new life skills curriculum for in and out of school youth.

Chapter 2

Methodology

The current study's research design is presented in this section.

2.1 Objectives

2.1.1 General Objectives

1. To assess the extent/scope of knowledge that young people 16 to 21 years of age in the Corozal District have of HIV.

2. To identify young people's 16 to 21 years of age in the Corozal District attitudes related to HIV.

3. To identify (a) sexual practices of active and (b) characteristics of non-sexually active young people 16 to 21 years in the Corozal District.

4. To assess levels of risk in sexual behavior related to HIV in young people 16 to 21 years in the Corozal District.

2.1.2 Specific Objectives

1a. Determine respondents' knowledge of primary ways of contracting the virus.

1b. Determine respondents' knowledge of five key facts about HIV.

1c. Determine respondents' misconceptions about HIV.

1d. Determine respondents' knowledge of means of protection against contracting the virus.

2a. Determine respondents' level of acceptance of people living with HIV.

3a. Identify percentage of respondents who are sexually active.

3b. Identify reasons why respondents are not sexually active.

3c. Identify future plans about sexual activity among respondents who are not sexually active.

3d. Identify level and origin of pressure among respondents to engage in sexual activity

3e. Identify age of sexual initiation among respondents.

3f/4.Identify number and type of sexual partners.

3d.Identify if first sexual experience was non-consensual.

3e. Describe partner on first sexual experience.

3f. Identify common venues for sexual encounters.

3g. Identify who initiates sexual activity.

3h. Determine incidence of transactional sex.

3i. Identify types of sexual behavior that respondents engage in.

4a. Determine respondents' level of condom use in vaginal, oral and anal sex.

4b.Identify respondents' reasons for using or not using condoms.

4c. Identify level of alcohol and other drug use prior to sexual activity.

2.2 Methodology

2.2.1 Type of Study

The current study is a baseline study, quantitative in design as data collected was quantified and analyzed numerically. Further, the current study is descriptive, cross sectional, and prospective in nature as information present in the target population was recorded and measured at one specific point in time and variables were not manipulated. Since this is a baseline study, the researchers will describe characteristics of the target population in the results section.

2.2.2 Target Population

The target population consisted of Corozal District youths between the ages of 16 and 21 years. For the purposes of this study the population was divided into two sub groups: (a) youth 16 to 21 years pursuing studies at Corozal District high schools (third and fourth years) and tertiary level institutions (in school youth); (b) Corozal District youth 16 to 21 years not currently pursuing formal educational studies (out of school youth).

2.2.3 Subjects/Sample

The ideal sample population and size are described below:

A. In-school Youth

There are six (6) high schools in the Corozal District with seventeen (17) third year and seventeen (17) fourth year classrooms with an average of thirty (30) students per classroom. The total number of these students is approximately 1020 students. First and second year students were excluded from the study because on average they fell below the age range studied. Additionally, there are three junior colleges with a population of 706 students. Thus a census of these students was to be conducted.

B. Out of school Youth

The total number of out of school youth (target population b) 16 to 21 years old in the Corozal District is 5300; rural population =3955, urban population = 1345 (SIB, 2011).

Sample size = $n=1/E^2$; $n=1/(.05^2)=400$. Current studies in Belize normally have a 15% non-response rate (n x 1.15=460).

Thus the sample size for the current study was 460 youths; proportionally based on the rural urban target population for the current study, the sample size= Urban Corozal youth not in school =120, Rural Corozal youth not in school=340. Both the rural and urban sample was chosen using households.

The number of households in villages in rural Corozal is 30774 (SIB, 2011). The villages used in this study were chosen by a systematic sampling technique proportional to the number of households per village. The actual households in the sample were chosen proportional to the number of households per village (Table 1). The actual household selection in each village and in urban Corozal was done by a quota sampling technique.

Table 1. Number of households in sample by village

Village	No. of Households	Proportional %	Sample Size
Calcuta	846	5.5	19
Chunox	1375	8.9	30
Cristo Rey	869	5.6	19
Little Belize	2650	17	58
Paraiso	1007	6.5	22
Progreso	1357	8.8	30
San Antonio	517	3.8	13
San Narciso	2422	15.7	53
San Victor	962	6.2	21
Sarteneja	1824	11.8	40
Xaibe	1575	10.2	37
Total 11	**15404**	**100**	**460**

2.2.4 Criteria for Inclusion, Exclusion and Elimination

2.2.4.1 Inclusion Criteria

- Corozal District third, fourth year high school and junior college students whom principals or deans gave permission for the survey to be conducted.
- Corozal District third, fourth and junior college students of both sexes.
- Corozal District third, fourth year high school and junior college students who are in the age range of 16 to 21 years.
- Corozal District third, fourth year high school and junior college students who attended classes the day the survey was conducted
- Corozal District third, fourth year high school and junior college students 16 to less than 18 years of age whose parents gave signed informed consent to participate.

- Corozal District third, fourth year high school and junior college students 16 to less than18 years old who voluntarily wanted to participate, who gave informed consent and whose parents granted permission to participate in survey.
- Corozal District third, fourth year high school and junior college students 18 to 21 years who voluntarily wanted to participate after giving informed consent.
- Corozal District youth 16 to less than18 years of age not in school who were part of the sample and whose parents gave signed informed consent to participate.
- Corozal District youth 16 to less than 18 years of age not in school who were part of the sample, whose parents gave signed informed consent to participate and who voluntarily wanted to participate after giving informed consent.
- Corozal District youth 18 to 21 years of age not in school who were part of the sample and who wanted to voluntarily participate after giving informed consent.

2.2.4.2 Exclusion Criteria

- Youths between the ages of 16 and 21years who do not attend high school or junior college in the Corozal District.
- Corozal District youth including those in the formal education system and those who are not who fall outside the age range of 16 to 21 years.
- Corozal District third, fourth year high school and junior college students between the age range of 16 and 21 years whose principal or dean did not agree to participate in the survey.
- Corozal District third, fourth year high school and junior college students who did not attend classes the day the survey was conducted.
- Corozal District third, fourth year high school and junior college students 16 to less than 18 years whom parents did not sign the letter of informed consent allowing them to participate in survey.
- Corozal District third, fourth year high school and junior college students 16 to less than 18 years whom did not want to participate in the survey although parents signed the letter of informed consent allowing them to participate in the survey.

- Corozal District third, fourth year high school and junior college students 18 to 21 years whom did not voluntarily want to participate or did not give informed consent.
- Corozal District youth 16 to18 years of age not in school who were part of the sample population and whose parents did not give signed informed consent to participate.
- Corozal District youth 16 to18 years of age not in school who were part of the sample and whose parents gave signed informed consent to participate but were unwilling to participate.
- Corozal District youth 18 to 21 years of age not in school who were part of the sample and who did not give informed consent to participate.
- Corozal District youth 18 to 21years of age not in school who were not available the day the survey was conducted.

2.2.4.3 Elimination Criteria

- Corozal District youth who fall in the age range 16 to 21 years both in the formal education system and those who are not who submitted incomplete questionnaires.
- Corozal District youth who fall in the age range 16 to 21 years both in the formal education system and those who are not who included information not requested.
- Corozal District youth who fall in the age range 16 to 21 years both in the formal education system and those who are not who submitted the questionnaire on a different day to when the questionnaire was collected.

2.2.5 Definition of Variables

Variable	Operational Definition	Indicators	Measurement Scale
Socio demographic Characteristics	Social and demographic characteristics of youths in the Corozal District	Age	Ratio: 16-21
		Sex	Nominal: Female, Male
		Ethnic group	Nominal: Creole, Garifuna, Mestizo etc.
		Family Type	Nominal: Single, Nuclear, Extended, Blended
		School	Nominal: Name of High School or Junior College
		Form/Year	Ratio 3, 4 (HS) 1,2 (JC)
		School location	Nominal: Urban, Rural
		Location of Residence Educational Participation Employment	Nominal: Urban, Rural Nominal In school/not in school Nominal Full time, part time
Knowledge of HIV	(a) Agreement with primary ways that the HIV virus is transmitted (b) Agreement with general information about HIV	Primary ways of transmission 5 basic facts about HIV	Ordinal: Low, Medium, High Unprotected sex, mother to child transmission, sharing of infected needles, exposure to infected blood or other body fluid, transfusion of HIV infected blood. Existence of HIV, Dissonance between HIV status and physical appearance, STIs, STIs increase chances of contracting HIV, HIV is incurable
	(c) Disagreement with common myths about how HIV is transmitted and prevented	10 common myths	Ordinal: Low, Medium, High HIV is transmitted by mosquitoes, is transmitted by sharing food, sharing a toilet, sharing a cup, HIV can be transmitted by supernatural means, HIV can be prevented by supernatural means, using herbs, taking a bath after sex, only engaging exclusively in oral sex,

			by having sex with a virgin
	(c) Agreement with primary ways to prevent the transmission of the HIV virus	5 primary ways of preventing HIV transmission	Ordinal: Low, Medium, High Consistent condom use, with hold breastfeeding for HIV positive babies, not sharing needles, protect body from contact with others' body fluids , abstaining from sexual intercourse
Attitude about HIV	Reported beliefs about personal protection from HIV infection and HIV positive people	Levels of personal protection and tolerance demonstrated	Ordinal: Low, Medium, High Eg: insistence on condom use, willingness to buy food from an HIV positive vendor (see questionnaire)
Sexual practices	Reported prevalence and pattern of sexual behavior of target population first experience, lifetime and in last twelve months	Frequency, venue, nature, types and number of partners, common venues (see specific objectives)	Categorical
Level of Risk	Any characteristic, behavior or attitude which may increase the likelihood that the person acquires HIV	Risky sexual behavior in last twelve months	Ordinal: Low, Medium, High irregular condom use, unprotected vaginal sex, unprotected anal sex, multiple partners ,sexual activity under the influence of licit and illicit drugs, group sexual activity

2.2.6 Data Collection

- The researchers sought permission from Corozal District High School and Junior College authorities to conduct the survey.
- The researchers sought approval from the Ministry of Health Human Studies Committee to conduct the study.
    - ***Once the necessary approvals were granted (Appendix 1) the following was done:***
    - ***Sub group A-Third and fourth year high school and junior college students***
- The researchers conducted informative meetings with secondary and junior colleges' authorities to explain the objectives, outcomes, benefits and mechanics of the study. Permission was obtained to send letters of informed consent to parents of students 16 to less than 18 years old Appendix 2). Before administering the questionnaire, the signed letters of informed consent were collected to determine which students had been granted permission by their parents to participate in the survey.
- Informed consent was also sought from students in the 18 to 21 years group in the form of the letter of informed consent (Appendix 4) attached to the questionnaire.
- The questionnaire was completed by (a) those students 16 to less than18 years old whose parents signed the informed consent letter and who assented to participate in the survey and (b) those students 18 to 21 years who gave informed consent.
- Students 16 to less than 18 years old who did not assent to participate in the survey even though their parents had given permission did not participate.
    - ***Subgroup B-Youth 16 to 21 years not in school***
- Signed informed consent was sought from parents of youth 16 to less than18 years who comprised part of the sample population. In this subgroup only those whose parents provided signed consent participated in the survey.
- Informed consent was also sought from youth 18 to 21 years in the form of a letter of informed consent attached to the questionnaire.
- The questionnaire was completed by (a) those youths 16 to less than18 years old not in school whose parents signed the informed consent letter and who assented to participate

in the survey and (b) those youths not in school 18 to 21 years who gave informed consent.

- ***All groups***

- Members of the National Aids Committee Corozal District were trained to administer the questionnaire.
- Completed questionnaires for all subgroups sealed in envelopes were given to the researchers who ensured that confidentiality was met in the handling of the data.

2.2.7 KAP Study's Sample Size

Of the questionnaires completed, only 384 met inclusion and elimination criteria. Two schools did not participate in the survey and of those whose authorities granted permission for students to participate in the study, a majority of the parents did not grant permission for their less than 18 year old children to participate in the study. The same held true for out of school youth.

2.2.8 Data Collecting Tool

The instrument utilized was a self-report questionnaire (Appendix 5). There are four sections in the questionnaire which include socio-demographic characteristics; knowledge related to HIV/AIDS; attitudes related to HIV/AIDS and sexual practices related to HIV/AIDS. The questionnaire was based on standardized scales used to measure knowledge, attitude and sexual practices related to HIV/AIDS. The attitude scale which has been used by other researchers is based on Torabi and Yerber's (1992) HIV prevention attitude scale for teenagers. The most current researchers to use the scale were Rampal, Mohammadi, Abdullah and Rahnman (2010). The knowledge, prevention and sexual practice's scales are based on standardized items used in KAP studies and recently used in Tan et al. (2007), Belize MICS Four (2012), Baseline Knowledge Attitudes and Practices Survey (Catzim, 2011), and Celand (2001). Items on reasons for condom used were based on Day's (2011) BSS SLU Survey Instrument. The scales were adapted based on the literature review and expertise of NAC personnel working with teenagers.

Once drafted, the instrument was pilot tested with University of Belize students in an undergraduate Psychology class. Based on the results, some changes were made to the level of language used and directions were made clearer. A focus group was also held with the students to determine level of comfort with the sensitive questions asked. Students did say that they felt uncomfortable with the questions on anal sex but reported that it was important to gather empirical evidence on the issue. The questionnaire, letter of informed consent (Appendix 4) and the informed consent forms for parents (Appendix 2 & Appendix 3) were translated into Spanish for non –English speakers.

2.2.9 Data Analyses

The statistical software that was used to capture and analyze the data collected was the Statistical Package for the Social Sciences (SPSS 20). Frequencies, percentages, cross tabulations, chi square tests, computing and recoding of scales were utilized.

2.2.10 Ethical Considerations

Since one of the subgroups of the population comprised of minors (youth 16 to less than 18 years of age) permission was obtained from parents and relevant school authorities for youth in school. Additional, informed consent forms were signed by parents (Appendix 2-youth in school; Appendix 3-youth not in school) and letters of informed consent were given to participants (Appendix 4) before they could participate in study. Relevant authorities were also provided with letters of informed consent also. For youth in school, staff or faculty members were not used to administer the questionnaire so that confidentiality could be maintained.

Because of the sensitivity of the issues being investigated, qualified trained counseling personnel was made available should any participant have required such services. However, none of the participants requested such service.

Results of the survey are presented the following section.

CHAPTER 3

Results

Results of 384 KAP survey questionnaires are presented in this section. Socio demographic characteristics of the respondents, HIV general knowledge, knowledge of transmission and prevention of HIV, and attitudes towards persons living with HIV of the in and out of school respondents are detailed. Additionally reported first time, lifetime and sexual practices of the respondents in the last twelve (12) months are described.

3.1 Socio-demographic Characteristics

Three hundred and eighty four (384) Corozal District youths between the ages of 16 and 21 years completed the questionnaire. Of these 271 reported attending high schools or sixth forms, 104 reported not being in school and 9 did not report their education status. The average age of the participants was 18.28 years with the in school respondents' average age (18.16) below the sample population's mean and the out of school youth's average age (18.64) above the sample population's mean. More than half the youth (59.9%) were female while 40.1% were male.

A majority of respondents (70.7%) identified themselves as Mestizos, 11.2% as Spanish, 11% as Creole, and 2.7% as East Indian. Other reported ethnicities (4.4%) were grouped together and included Maya Kechi, Maya Mopan, Chinese, Menonite, African and Mixed. Although 50% of the 98 youths who reported being employed were in school youth, of the 96 who reported employment type, 75% out of school youth reported full time employment and 83.3 % of in school youth reported part time employment. Additionally, 71.5% of all respondents reported living in rural Corozal with 67% of in school youth living in rural Corozal compared to 83.3% of out of school youth living in rural Corozal.

The majority of participants (59.9%) reported living in nuclear families and 34.1 % reported living in single parent families. Although half of the single parent families were headed by a mother, respondents reported living in single parent families headed by a grandparent (18.3%), a father (6.7%), a brother or sister (7.5%), a guardian (7.5%), other relative (3.3%), family friend (3.3%), or stepparent [3.3%] (Table 1).

Table 1. Frequency and percentage distribution according to in school and out of school youth demographic characteristics.

Characteristics	In School Youth		Out of School Youth		Total	
	Fi	%	*Fi*	%	*fi*	%
Sex						
Male	109	41	39	37.9	148	40.1
Female	157	59	54	62.1	221	59.9
Total	266	100	103	100	369	100
Average Age						
Average Age	18.16		18.64		18.28	
Family Type						
Blended	7	2.7	1	1.1	8	2.3
Extended	4	1.6	0	0	4	1.1
Nuclear	156	60	53	57	209	59.9
Single Parent	85	32.2	34	36.6	119	34.1
Other	4	1.6	5	5.4	9	2.6
Total	256	73.4	93	26.6	349	100
Ethnicity						
Creole	35	13.2	5	5.1	40	11
East Indian	8	3.0	2	2.0	10	2.7
Mestizo	191	71.8	67	67.7	258	70.7
Spanish	18	6.8	23	23.2	41	11.2
Other	14	5.2	2	2.0	16	4.4
Total	266	100	99	100	365	100
Employment Status						
Employed	48	18.3	50	49.5	98	27.0
Not Employed	214	81.7	51	50.5	265	73.0
Total	262	100	101	100	363	100
Employment Type						
Full Time	8	16.7	36	75	44	45.8
Part Time	40	83.3	12	25	52	54.2
Total	48	100	48	100	96	100
Residency						
Rural Corozal	146	67	70	83.3	216	71.5
Urban Corozal	72	33	14	16.7	86	28.5
Total	218	100	84	100	302	100

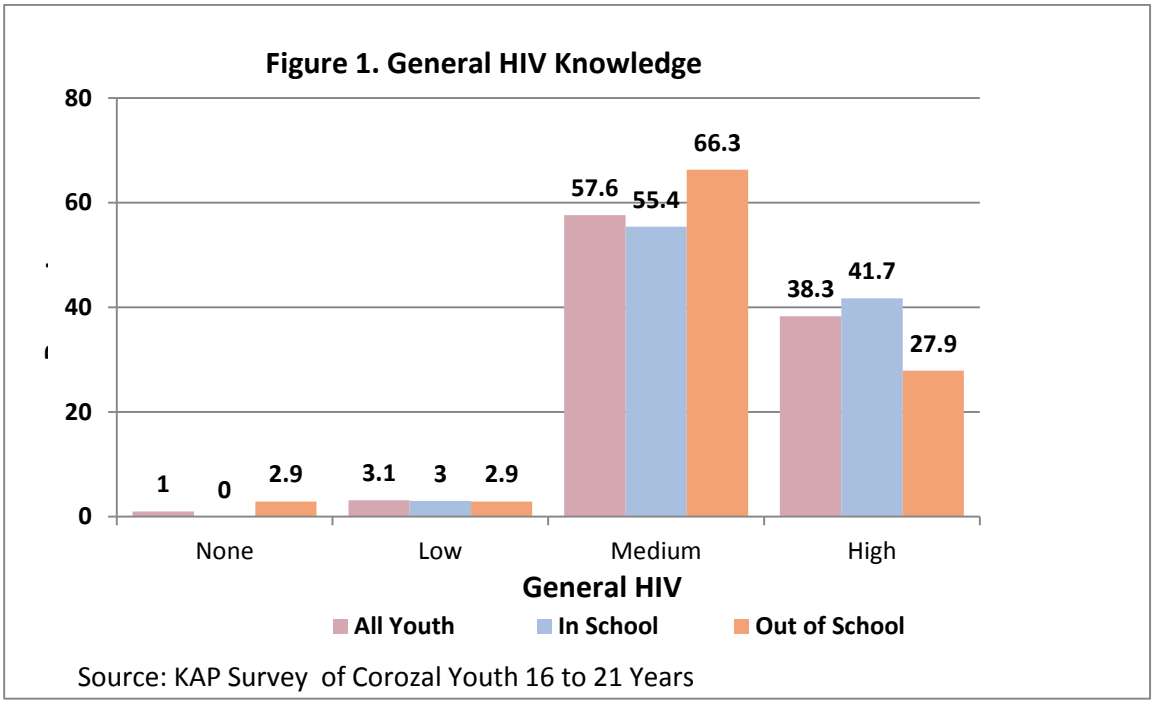
Source: KAP Survey of Corozal Youth 16 to 21 Years

N varies because some respondents did not answer all items on KAP Survey.

3.2 General HIV Knowledge

Figure 1 illustrates the results of Corozal in and out of school youth's general HIV knowledge. Five items [Appendix 5] (Belize MICS 4, 2012; Tan et al., 2007) were used to explore this indicator with 0 items correct = No knowledge, 1 to 2 correct = Low Knowledge, 3 to 4 = Medium Knowledge and 5 = High Knowledge. Results indicate that of the total respondents, 1% had no knowledge, 3.1% had low knowledge, 57.6% had medium knowledge and 38.3% had high knowledge. In two categories, low (2.9%) and high (27.9%), out of school scored lower than the sample's score. Sixty six point three (66.3%) of the out of school youth fell in the medium category compared to 57.6% of all youth. However a higher percentage of out of school youth (2.9%) compared to 1% of all youth had no general HIV knowledge.

A higher percentage of in school youth (41.6%) fell in the high general knowledge category compared to both all youth and out of school youth. However, only 55.5% of in school youth fell in the medium general knowledge category which was lower than both the all youth and out of school groups. The in school group (3.1%) was almost similar to the all youth group (3%) in the low category.



Source: KAP Survey of Corozal Youth 16 to 21 Years

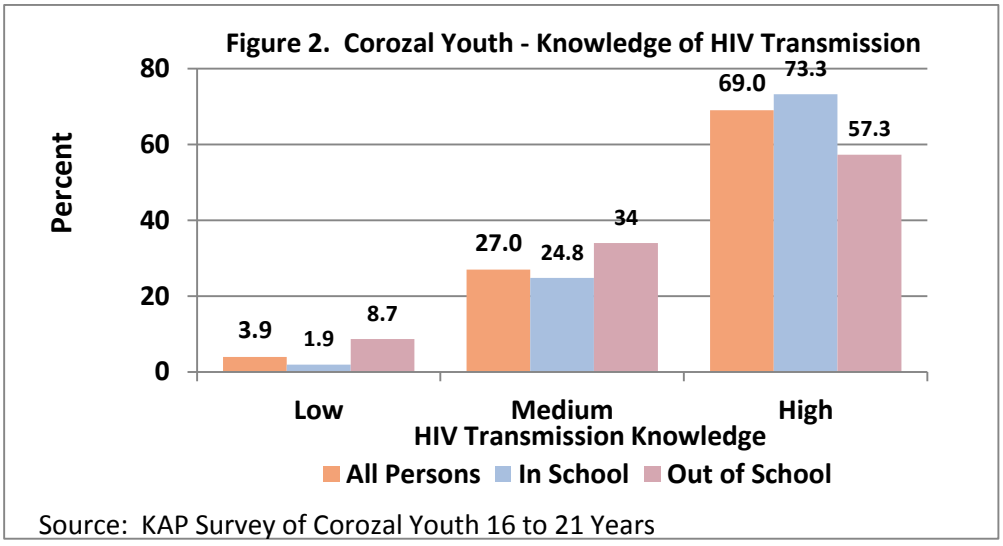
3.3 Knowledge of HIV Transmission

Figure 2 shows the results of Corozal in and out of school youth's knowledge regarding HIV transmission modes. Ten items [Appendix 5] (Tan et al., 2007) were used to explore this indicator. The items were stratified into no knowledge (0 items), low knowledge (1-4 items correct), medium knowledge (5 to 7 items correct) and high knowledge (8 to 10 items correct). The data shows that the majority (69.0%) had high knowledge. Indeed this was true for both the in school group (73.3%) and the out of school group (57.3%). However at the medium level, it was the out of school group (34%) with the highest percentage. The group which had the highest percentage of respondents with low knowledge was the out of school group (8.7%) compared to 1.9% of the in school group and 3.9% of all youth.

Although knowledge of HIV transmission was good, there were some misconceptions regarding non transmittable routes. These misconceptions included that HIV could be transmitted through:

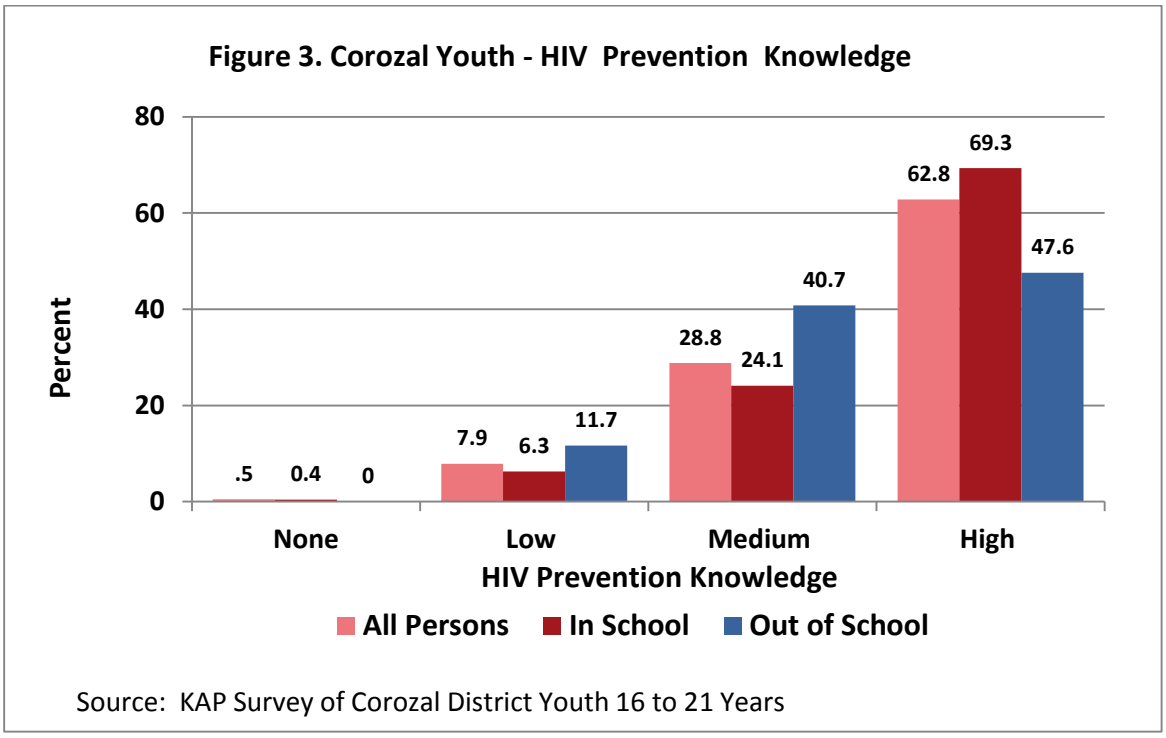
4. The sharing of food (17.4%; *n*=379);
5. Sharing a toilet with an infected person(35.3%; *n*=377);
6. Sharing a cup with an infected person (18.8%; *n*=377);
7. A mosquito bite (41.7%; *n*=376);
8. Obeah, curanderos or other supernatural means (30.1%; *n*=377).

Indeed 100 youth or 26.2 % (*n*=381) answered all HIV transmission questions correctly.



3.4 Knowledge of HIV Prevention

Figure 3 displays all youths' knowledge in the area of prevention. Ten items [Appendix 5] (Tan et al., 2007) were used to explore this indicator. The items were stratified into similar strata as Knowledge of HIV Transmission described above. The data reveals that the majority (62.8%) had high knowledge. Indeed this was true for both the in school group (69.3%) and the out of school group (47.6%). However at the medium level, it was the out of school group (40.7%) with the highest percentage compared to 24.1% for the in school group. The group which had the highest percentage of respondents with low knowledge was the out of school group (11.7%) compared to 6.3 % of the in school group and the in school group had a higher percentage of youths with no prevention knowledge (.4%).



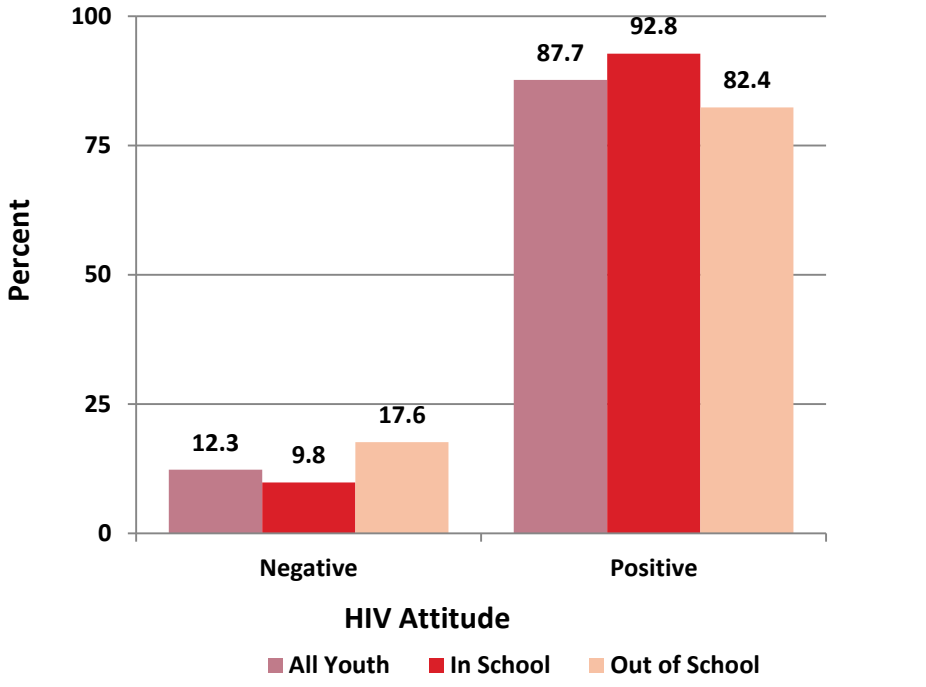
3.5 HIV Attitudes

Figure 4 illustrates the results of Corozal in and out of school youth's attitudes towards people living with HIV and AIDS. A scale consisting of 16 items [Appendix 5] (Torabi & Yarber, 1992; Rampal, Mohammadi, Abdullah, & Rahman, 2010) was used. The items were Likert Type items with 1= Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=Strongly

Agree. Items 3, 4,5,8,11,12, and 13 were reversed scored. The highest score a respondent could obtain was 90. Thus the higher the score a respondent obtained the more positive and accepting the attitude of the respondent. The scores ranged from 19 to 90. The scores were further recoded with the lower scores interpreted as negative, non accepting attitudes and the higher scores as positive, accepting attitudes.

The respondents' attitudes towards people living with HIV and AIDS were found to be accepting and positive (87.7%). Generally, in school youths (92.8%) reported being more accepting and positive than out of school youths (82.7%). However, approximately one third of the sample population reported that they would feel uncomfortable sharing a toilet with a person living with HIV/AIDS (37.8%) or buying food from a vendor if they knew the vendor were HIV positive (39.2%).

Figure 4. Corozal Youth Attitudes towards Persons Living with HIV/AIDS



Source: KAP Survey of Corozal Youth 16 to 21 Years

With regard to differences in school and out of school youth differences in general knowledge, knowledge of transmission, prevention and attitudes, results of chi square tests suggest significant statistical differences in all four indicators (Table 2). These findings indicate that in school youth are more likely to have higher general knowledge, higher knowledge of

HIV transmission modes, and higher knowledge of HIV prevention and be more accepting of persons living with HIV and AIDS than out of school youth. Generally in school youth tend to be more knowledgeable than out of school youth.

Table 2. Chi square tests of significance for all four HIV/AIDS indicators

HIV Knowledge	In School		Out of School		Values	
	fi	%	*fi*	%	X^2	$P \leq .05$
General Knowledge						
None	0	.0	3	2.9	13.161	.004
Low	8	3.0	3	2.7		
Medium	150	55.4	69	66.3		
High	113	41.6	29	27.9		
Transmission						
Low	5	1.9	9	8.7	14.498	.001
Medium	67	24.8	35	34.0		
High	198	73.3	59	57.3		
Prevention						
None	1	.4	0	.0	15.813	.001
Low	17	6.3	12	11.7		
Medium	65	24.1	42	40.8		
High	187	69.3	49	47.6		
Attitude						
Negative	26	9,8	18	17.6	4.286	.038
Positive	239	90.2	84	82.4		

Source: KAP Survey of Corozal Youth 16 to 21 Years

Sexual Practices

3.6.1 Characteristics of Non- Sexually Active Youth

Sexual practices are associated with risk for pregnancy, sexually transmitted infections (STIs) and HIV/AIDS (Ajmal, Agha & Karim, 2011). Therefore, the researchers felt that it was imperative to gather baseline data on sexual practices of Corozal Youth. A little above a third of the respondents (38.5%) reported not being sexually active, 58.1% admitted to being sexually active and 3.4% did not respond to this question.

Respondents were asked to report on reasons for not engaging in sex, future plans about becoming sexually active, whether they felt pressured to become sexually active and from whom they felt pressured. Table 3 indicates that 55.3% of the respondents who indicated that they were not sexually active felt they were not ready for sex, 58.4% were afraid of getting pregnant, 31.1% had not had the opportunity and 60.5% felt it was morally wrong to engage in sex before marriage. However, the majority reported abstaining from sex because of fear of contracting the HIV virus (77.6%) and getting other sexually transmitted diseases (70.6%). This indicates that these respondents are aware of the risk for HIV through sexual practices. Differences in school and out of school youth percentages by reasons were small with out of school youth having the

higher percentages in all reasons except one. Out of school youth (58.3%) felt less strongly than in school youth (61.1%) that having sex before marriage was morally wrong.

Table3. Frequency and percentage distribution according to in school and out of school non-sexually active youth

Characteristics	In School Youth		Out of School Youth		Total	
	fi	%	*Fi*	%	*fi*	%
Reasons for not having sex						
Do not feel ready	68	54	22	61.1	90	55.6
Have not had the opportunity	38	30.4	12	33.3	50	31.1
Sex before marriage is wrong	77	61.1	21	58.3	98	60.5
Afraid of getting pregnant	72	58.1	22	61.1	94	58.4
Afraid of getting HIV/AIDS	97	77.6	28	77.8	125	77.6
Afraid of other STD's	86	69.4	27	75	113	70.6
Future Plans about Sex						
Wait until marriage	77	61.6	22	61.1	99	61.5
Wait until engaged	11	8.8	4	11.1	15	9.3
Wait until find love	18	14.4	3	8.3	21	13.0
Wait until finish high school/junior college	4	3.2	0	.0	4	2.5
Have sexual intercourse when opportunity presents	6	4.8	2	5.6	8	5.0
No Response	9	7.2	5	13.9	14	8.7
Total	125	100	36	100	161	100
Pressure to Have Sex						
Pressure	37	29.6	8	22.2	45	28
No Pressure	78	62.4	27	75	105	65.2
No Response	10	8	1	2.8	11	6.8
Total	125	100	36	100	161	100
Persons Whom Pressure Youths to Engage in Sex						
Friends	32	68.1	4	36.4	36	62.1
Classmates	6	15.0	0	.0	6	11.8
Relatives	4	10.0	1	9.1	5	9.8
Girlfriend	5	12.8	0	.0	5	10
Boyfriend	9	23.1	5	45.5	14	28
Other	0	.0	1	9.1	1	2.1

Source: KAP Survey of Corozal Youth 16 to 21 Years

Accordingly, a majority (61.5%) of those not sexually active reported planning to wait until marriage before engaging in sexual intercourse. This was the same for both in school and out of school youth. Of the 28% of those not sexually active who reported feeling pressured to become sexually active, 62.1% reported that the pressure was coming mainly from friends and classmates (11.8%). In school youth appear to be more vulnerable to peer pressure (68.1% admitted pressure from friends, 12.8% admitted pressure from girlfriends and 23.1% admitted pressure from boyfriends) compared to out of school youth [36.4% admitted pressure from friends and 45.5% admitted pressure from boyfriends] (Table 3).

3.6.2 Characteristics of First Sexual Experience

Initiation of sexual intercourse at an early age contributes to vulnerability to HIV infection by exposing young people to more sexual partners and a longer period of sexual activity before settling into a monogamous relationship (Tenkorang & Matica-Tyndale, 2008). It was, therefore, important to collect data of first sexual experience of the current study's participants. Sexually experienced respondents reported first intercourse age from 10 to 21 years with a mean age of 16.3 years. Urban youth reported becoming sexually active (mean=15.8years) at a younger age than rural counterparts (mean=16.2years). Place of residence (χ^2 [2, 304] =1.993, p = .369) and educational level (χ^2 [2, 375] =4.778, p = .092) did not affect youth's decision to become sexually active.

On average sexual partners at first intercourse were three years older than the respondents with in school youth reporting slightly younger partners with a mean age of 18.7 years compared to 19.4 years for out of school youth. The three year difference between the respondents and first sexual partners suggests consensual relationships. This is further supported as a majority of respondents identified sexual partners as either a boyfriend (46.9%) or a girlfriend (28.8%). There was little variation between in school and out of school youth in these indicators. Further, 28.9% reported their first sexual experience occurring at their home, 26.9% at their boyfriend or girlfriend's home and 20.4% at a motel or hotel. A small percentage reported first sexual partners as one night stands (11.9%) or commercial sex workers (2.2%).

Although the data suggests consensual first sexual experience, 2.7% admitted being raped at first sexual experience by either a stranger or relative. Only in school youth reported coercive first sexual experience. Both groups cited the following practices for prevention of disease or

Table 4. Frequency and percentage distribution according to in school and out of school youth first sexual experience characteristics.

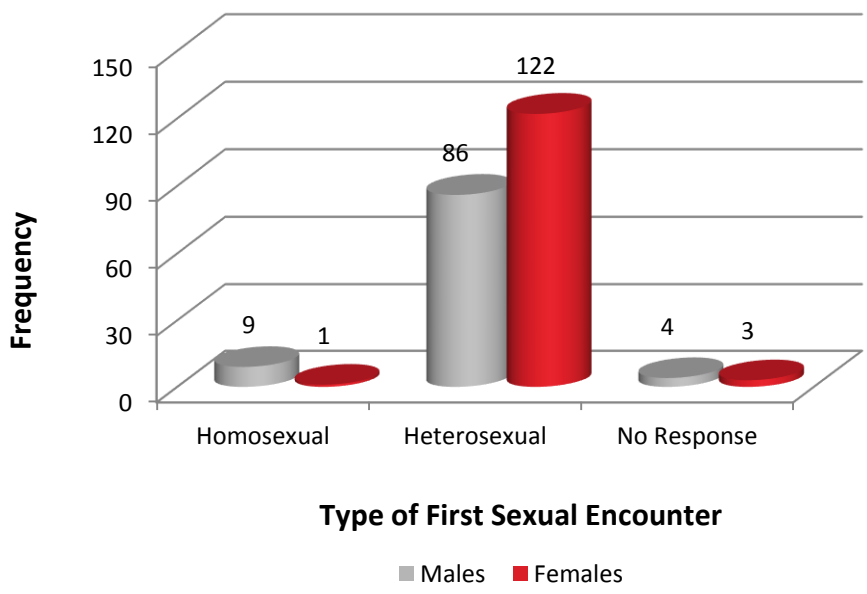
Characteristics	In School Youth		Out of School Youth		Total	
	fi	%	*Fi*	%	*Fi*	%
Sex of First Sexual Partner						
Male	91	58.7	40	55.5	121	57.7
Female	57	36.8	31	43.1	88	38.8
No Response	7	4.5	1	1.4	8	3.5
Total	155	100	72	100	227	100
Average Age						
Average Age of First Sexual Partner	18.7		19.4		19.0	
Average Age at First Sexual Encounter	16.3		16.4		16.3	
First Sexual Partner						
Boyfriend	73	47.5	33	45.8	106	46.9
Girlfriend	40	26.0	25	34.7	65	28.8
Stranger/Relative-Forced	6	3.9	0	.0	6	2.7
One Night Stand	19	12	8	11.1	27	11.9
Commercial Sex Partner	4	2.6	1	1.4	5	2.2
Other	5	2.6	4	5.6	9	4.0
No Response	7	4.5	1	1.4	8	3.5
Total	154	100	72	100	226	100
First Sexual Encounter's Venue						
Own Room/House	41	26.6	24	33.8	65	28.9
Friend's Room/House	16	10.4	4	5.6	20	8.9
Boyfriend/Girlfriend's Room/House	46	29.9	13	18.3	59	26.2
Motel/Hotel	26	16.9	20	28.2	46	20.4
Relative's House	11	7.1	7	9.9	18	8.0
Other	6	3.8	2	2.8	8	3.6
No Response	8	5.2	1	1.4	9	4.0
Total	154	100	71	100	225	100
Methods Used to Prevent Disease/Pregnancy						
Early Withdrawal	29	18.8	7	9.9	36	16.0
Condom	88	57.1	47	66.2	13.5	60
Morning After Pill	6	3.9	4	5.6	10	4.4
Herbal Treatment	0	.0	1	1.4	1	.4
No Method	24	15.6	9	12.7	33	14.7
Other	0	.0	3	4.2	3	1.3
No Response	7	4.5	0	.0	7	3.1
Total	154	100	71	100	225	100

Source:: KAP Survey of Corozal Youth 16 to 21 Years

pregnancy: early withdrawal (16%), condom use (60%), morning after pill (4.4%), herbal treatment (.4%), no method (14.7%) and 3.1% of participants did not respond (Table 4).

Further analysis of the data indicates that 57.7% of first sexual partners were male and 38.8% were females. This was expected as more females than males completed questionnaires (Table 4). Further analysis of the data shows that 10 of the first sexual encounters were with the same sex: 9 were men having sex with men and 1was a female having sex with a female (Figure 5). Of these, 2 incidences were reported as coercive. Both encounters were MSM.

Figure 5. Corozal Youth -Type of First Sexual Experience



Source: KAP Survey of Corozal Youth 16 to 21 Years

3.6.3 Characteristics of Lifetime Sexual Experiences

Analysis of the data indicates that 8.8% of the sexually active respondents have undergone some form of forced sexual encounter in their lifetime. This is a higher percentage than that reported for first sexual experience (2.2%). Further this incidence was reported as occurring more than once to the survivors of forced sexual encounters. In school youth appear to be more vulnerable (2.10) to forced incidences of sexual encounters compared to out of school youth (1.75). Youth vulnerability to HIV and other STI's is accentuated as 34.5% (35.8% in

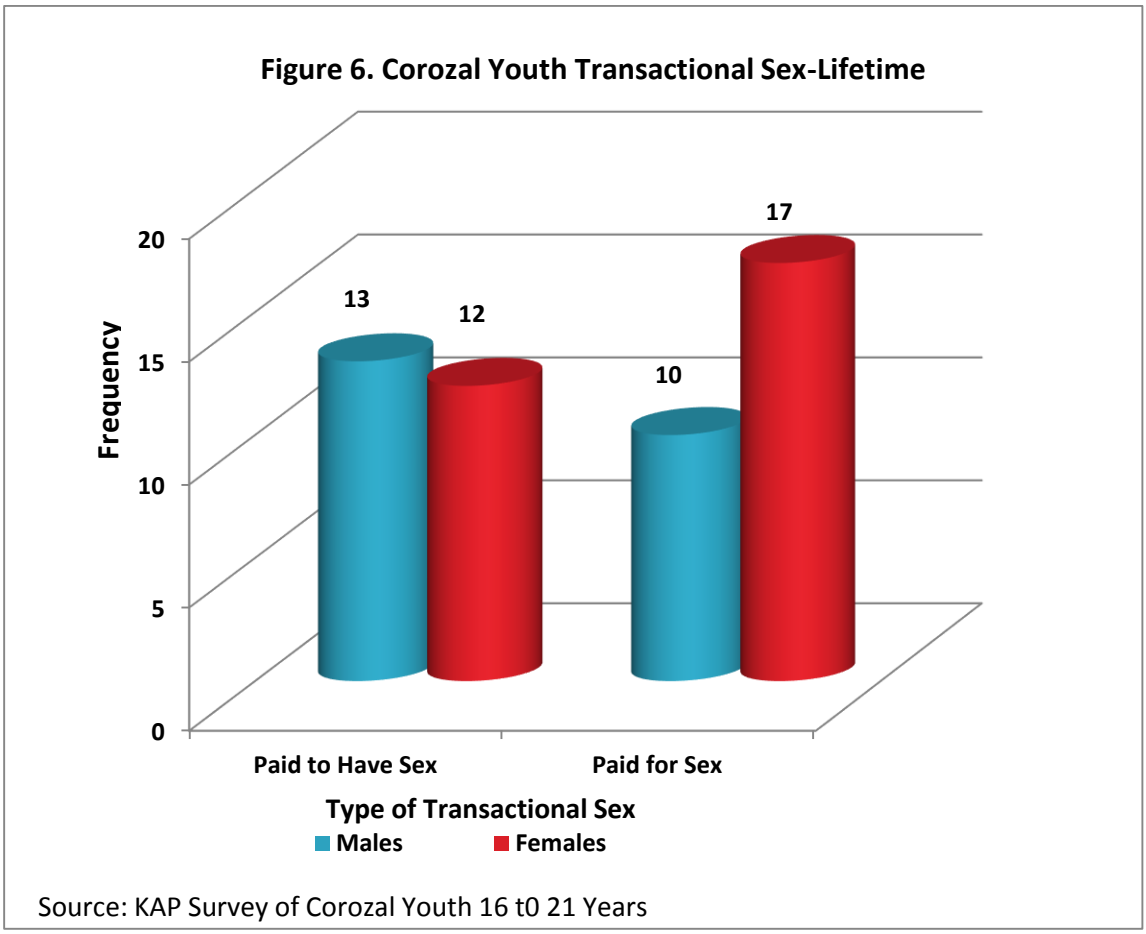
school youth; 31.4% of out of school youth) of the sexually active respondents reported having a minimum of four one night stands in their lifetime. Sexually active out of school youth reported higher incidences of one night stands (5.1) than sexually active in school youth (4.0). Out of school youth's average number of one night stands was also higher than that of all sexually active youth (4.31). The three most common venues for sexual activities in lifetime were respondent's house (42.2%), boyfriend or girlfriend's house (22.2%) and motel or hotel [16.4%] (Table 5). This is comparable to first sexual experience venues (Table 4). Further in school youth purported that sexual activities also take place during social functions such as school activities and parties.

Table 5. Frequency and percentage distribution according to in school and out of school youth lifetime sexual experiences.

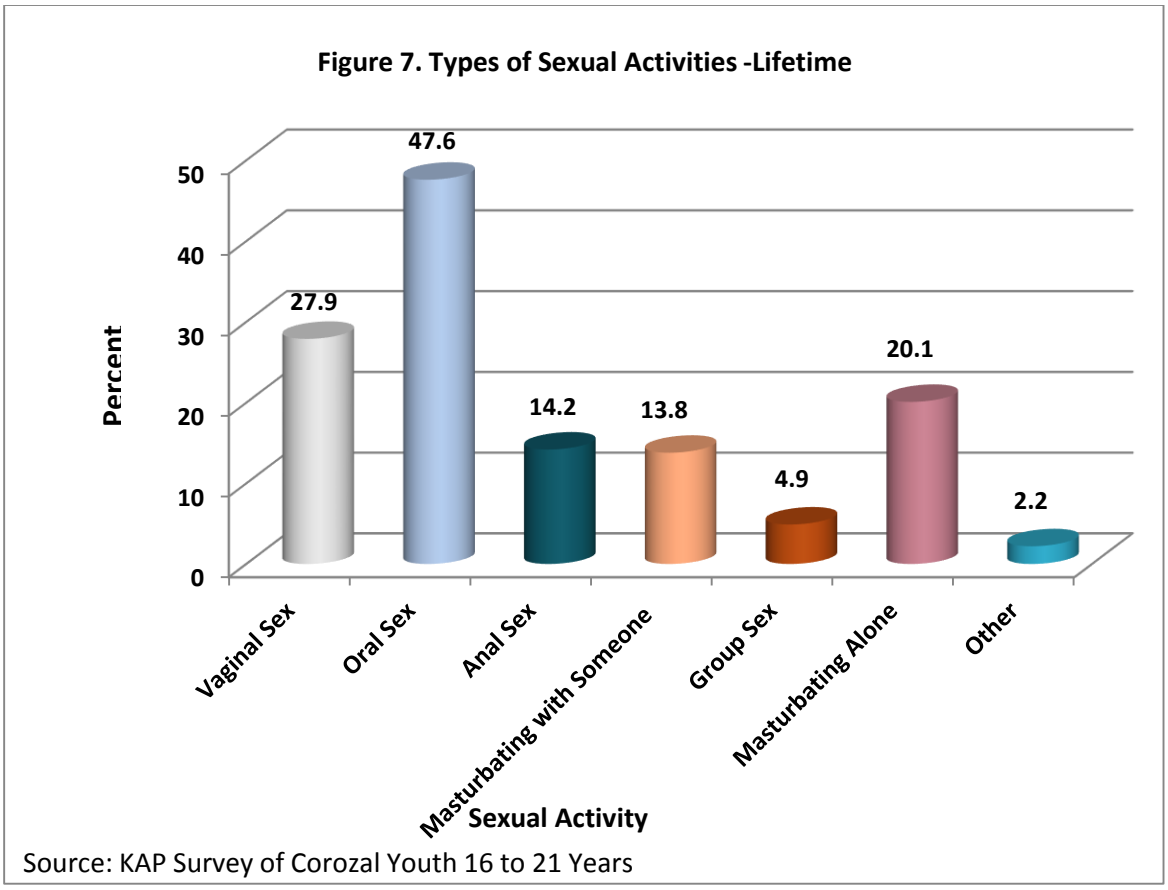
Characteristics	In School Youth		Out of School Youth		Total	
	fi	%	*Fi*	%	*fi*	%
Forced Sexual Intercourse						
Forced Sexual Intercourse	16	10.2	4	5.7	20	8.8
Average Number of Forced Sexual Encounters						
Average Number	2.10		1.75		2.04	
One Night Stands After Partying/Drinking						
Number of Youth	57	35.8	22	31.4	79	34.5
Average Number of One Stands						
Average Number	4.0		5.10		4.31	
Usual Venue for Sexual Encounters						
Own Room/House	65	41.9	30	42.9	95	42.2
Friend's Room/House	12	7.7	5	7.1	17	7.6
Boyfriend or Girlfriend's Room/House	40	25.8	10	14.3	50	22.2
Motel/Hotel	22	14.7	15	21.4	37	16.4
Relative's House	0	.0	3	4.3	3	1.3
Other	0	.0	3	4.3	3	1.3
No Response	16	10.3	4	5.7	20	8.9
Total	155	100	70	100	225	100
Methods Used to Prevent Disease/Pregnancy						
Early Withdrawal	64	41.8	11	15.3	75	33.3
Condom	125	81.7	55	76.4	180	80
Morning After Pill	53	34.6	11	15.3	64	28.4
Herbal Treatment	3	2.0	2	2.8	5	2.2
No Method	12	7.8	6	8.3	18	8.0
Other	5	3.3	1	1.4	6	2.7

Source: KAP Survey of Corozal Youth 16 to 21 Years

A small number of sexually active youth (42) have exchanged money for sex in their lifetime. Of these, 25 reported being paid for sex and 27 have paid for sex. Almost an equal number of males (13) and females (12) in the sample population have been paid for sex. However more females (17) have paid for sex compared to males (10) who have paid for sex (Figure 6).



In their lifetime sexually active respondents have participated in oral sex, vaginal sex, masturbating alone or with someone, anal sex and group sex. The three most commonly reported activities include oral sex (47.6%), vaginal sex (27.9%) and masturbating alone (20.1%). Anal sex was reported by 14.2% of sexually active respondents (Figure 7). Of those admitting to vaginal sex, 49.2% also participated in oral sex. Likewise, 15.8% of those involved with vaginal sex were also involved with anal sex. Thus, only about a third of the respondents have participated in only vaginal sex (35%) since becoming sexually active.

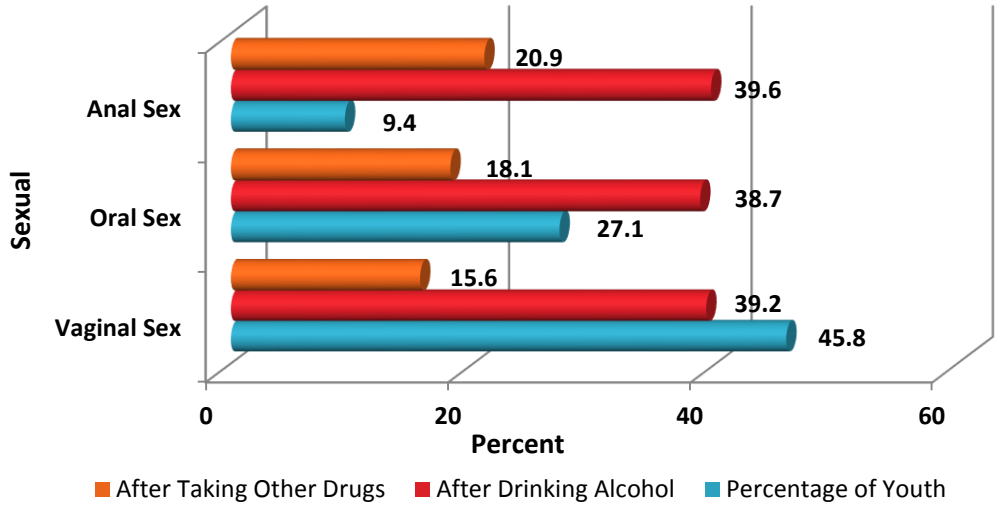


3.6.4 Characteristics of Sexual Experiences in the Last Twelve Months

Unprotected vaginal-penile intercourse has been known to be the predominant route for HIV and STI's transmission. Recent research evidence is indicating that youth from developing countries are also involved in oral and anal intercourse (Cherie & Berhans, 2012) that are additional routes for HIV/STI's. Sexual experiences detailed in this section include vaginal, oral and anal sex. Indeed 45.8% of sexually active respondents have participated in vaginal sex, 27.1% in oral sex and 9.4% in anal sex in the last 12 months. Incidence of vaginal sex has increased compared to the lifetime category while incidence of oral and anal sex has decreased for the last twelve month category compared to the lifetime category. Further 53.1% of the respondents who reported vaginal sex, reported oral sex and 18.4% also reported anal sex and vaginal sex. Less than a third (28.5%), a smaller percentage than in the lifetime category reported only vaginal sex.

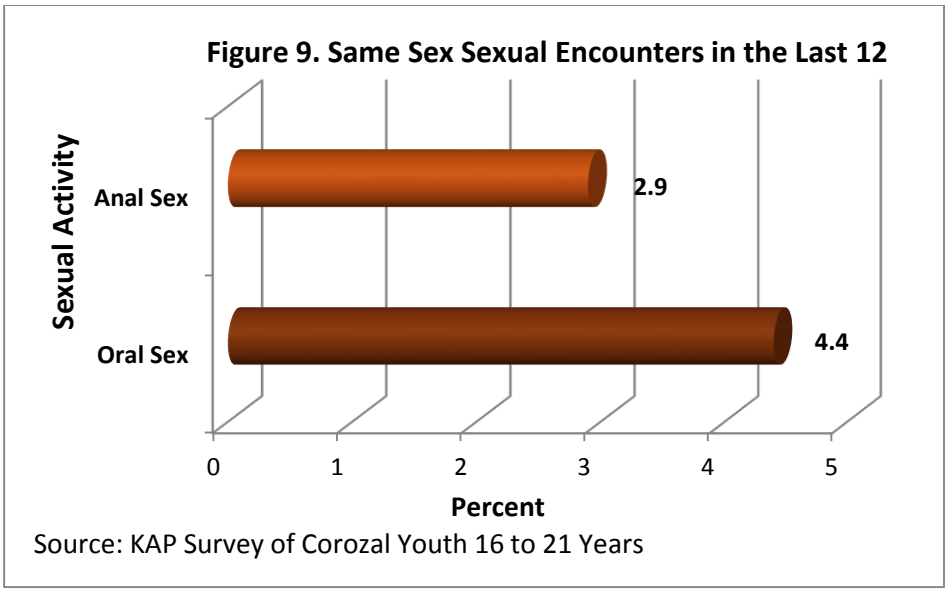
About one third of sexually active respondents who have participated in vaginal, oral or anal sex have done so after drinking alcohol (Figure 8).

Figure 8. Sexual Activity Under the Influence of Alcohol and Other Drugs In Last 12 Months



Source: KAP Survey of Corozal Youth 16 to 21 Years

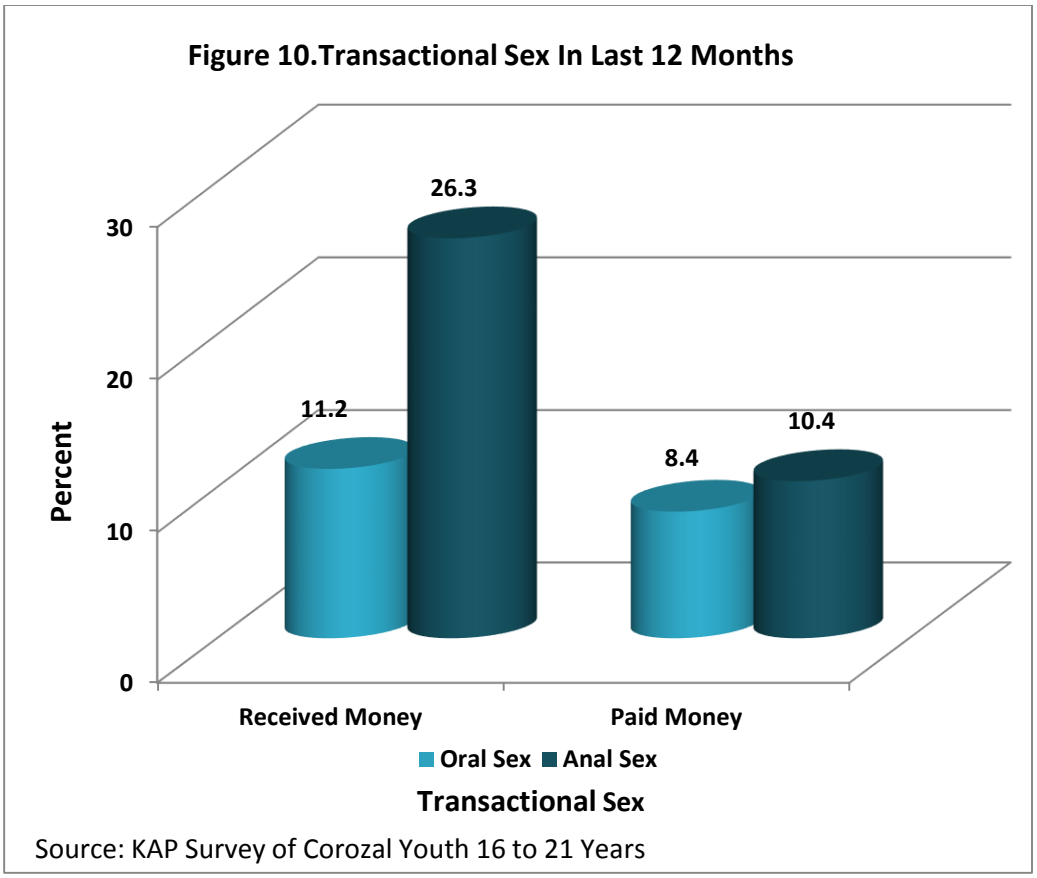
Of the 27.1% sexually active youth who have participated in oral sex, 4.4 % have had same sex partners and of the 9.4% who reported anal sex 2.9% have been same sex experiences (Figure 9). Further analysis determined that in the oral sex category in the last 12 months, 11 males have had oral sex with male partners and 6 females have had oral sex with female partners. In the anal sex category, 10 males had male partners and 1 female has had a female partner in the last 12 months.



Source: KAP Survey of Corozal Youth 16 to 21 Years

As reported in lifetime experiences some sexually active youth have also exchanged money for vaginal and oral sex in the last 12 months. Of the sexually active youth who have participated in oral sex in the last 12 months, 11.2% have received money for oral sex and 8.4% have paid for oral sex. Of the youth who have participated in anal sex, 8.4% have received money for anal sex and 10.4% have paid for anal sex in the last 12 months (Figure 10).

Of the youth who received money for sex in the last 12 months, 5 males and 7 females received money for oral sex and 4 males and 6 females received money for anal sex. Additionally, 4 males and 4 females paid for oral sex and 3 males and 2 females paid for anal sex.



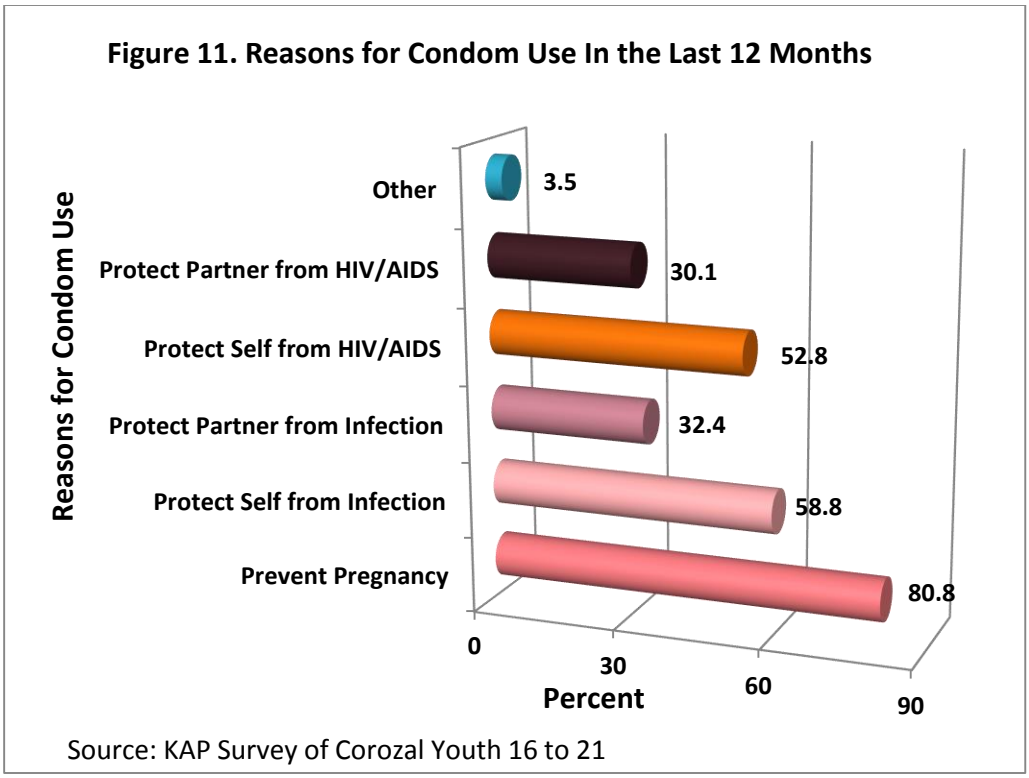
HIV and STI risk is increased if a person has multiple partners and does not wear a condom when performing sexual acts. Almost half of the respondents (47.1%) who have been sexually active (vaginal, oral or anal sex) in the last twelve months appear to be in monogamous relationships as they reported sex partners who were either steady boyfriends or girlfriends. This is further supported as 72.2% of those reporting vaginal sex and 70.8% of those reporting oral sex reported having one partner in the last 12 months. However, this percentage decreases for anal sex (50%). Indeed, the percentage of those reporting multiple partners is larger in every category for anal sex. The percentage of respondents reporting always using a condom when performing sexual acts decreases from 80% (lifetime) to 32.0% (vaginal sex), 20.6% (oral sex) and 31.6% (anal sex) in the last 12 months (Table 6).

Table 6. Frequency and percentage distribution according to type of sexual experiences 12 months

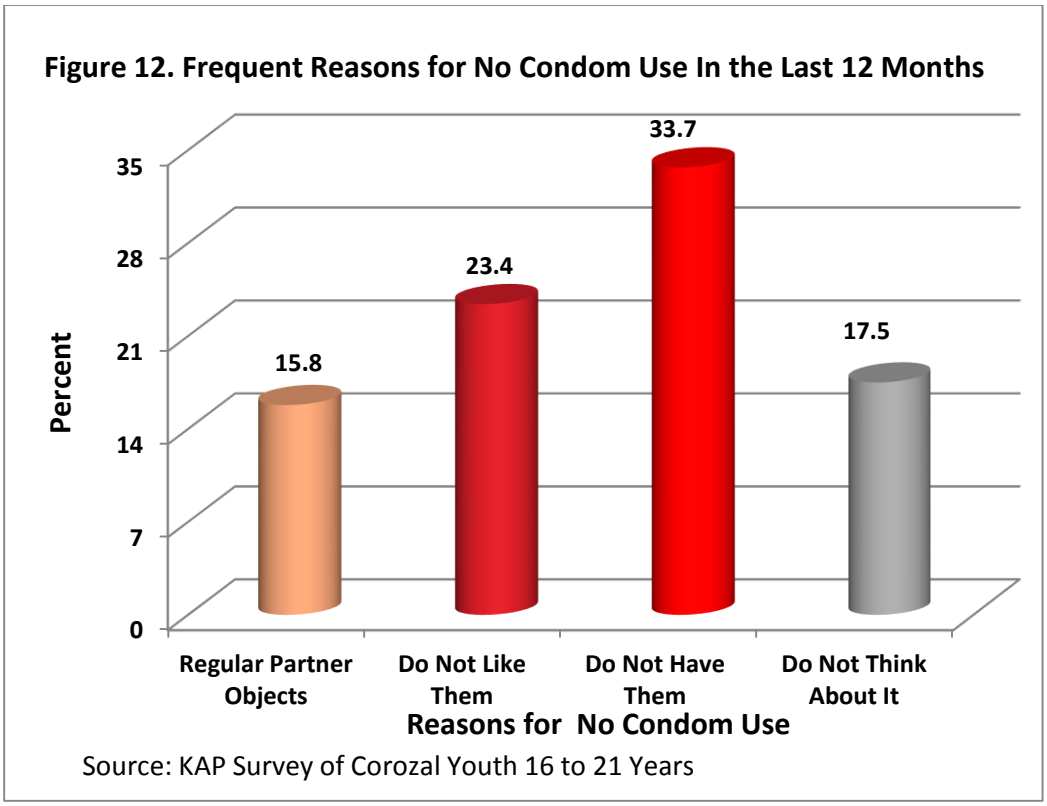
Characteristics	Vaginal Sex		Oral Sex		Anal Sex	
	fi	%	*Fi*	%	*fi*	%
Type of Sexual Partner						
One Night Stand	22	12.6	19	17.8	14	36.8
Friend	17	9.7	13	12.1	5	13.2
Steady Girlfriend	49	28.0	32	29.9	9	23.7
Steady Boyfriend	74	42.3	36	33.6	9	23.7
Sex Worker	1	.6	0	0.0	1	2.6
Other	12	6.9	7	7	0.0	0.0
Total	175	100	107	107	38	100
Number of Partners						
1	130	72.2	75	70.8	19	50
2-5	32	17.8	20	18.9	9	23.7
6-10	16	8.9	8	7.5	7	18.4
More than 10	2	1.1	3	2.8	3	7.9
Total	180	100	106	100	38	100
Condom Use						
Always	58	32.0	22	20.6	12	31.6
Sometimes	97	53.6	33	30.8	12	31.6
Never	26	14.4	52	48.6	14	36.8
Total	181	100	107	100	38	100
Sex Initiator						
Youth	86	54.1	53	56.4	21	70.0
Partner	73	45.9	41	43.6	9	30.0
Total	159	100	94	100	30	100

Source: KAP Survey of Corozal Youth 16 to 21 Years

The most important reason given by sexually active youth for condom use was to prevent pregnancy (80.8%), followed by protection of self from infection (58.8%), protection of self from HIV (52.8%), protection of partner from infection (32.4%) and protection of partner from HIV (Figure 11).



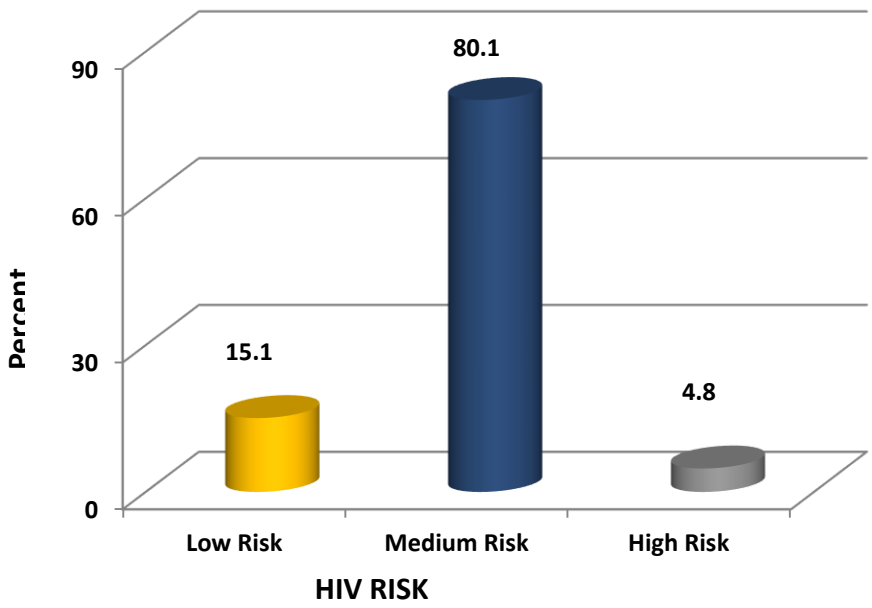
The most frequent reasons given for not using a condom in the last 12 months were not having condoms available (33.7%), not liking them (23.4%), not thinking about using a condom (17.5%) and regular partner objecting to use [15.8%] (Figure 12). Other reasons reported by less than 3 % of the sample population included afraid to suggest use, using condoms makes it look like the respondent has AIDS, respondent was paid not to use, and respondent paid partner not to use. Reasons reported by less than 2% of the population included the cost of condoms being too high and using a condom was not "macho".



3.7 HIV Risk

Unprotected vaginal, oral and anal sex, multiple sexual partners and sexual activity under the influence of licit and illicit drugs are sexual behaviours/practices known to increase the risk for HIV (Homma, Nicholson, Saewyc, 2012; Tenkorang & Matica-Tyndale, 2008). Therefore, in the current study these were the indicators used to measure level of HIV risk. Twelve (12) questionnaire items were used. These included items 19c, 20b, 21b, (multiple partners); 19d, 20d, 21d (unprotected sex); 19g, 20h, 21h (sexual activity under the influence of alcohol); 19h, 20i, 21i [sexual activity under the influence of illicit drugs] (Appendix 5). These items were computed and recoded with the higher the score of a respondent the higher the level of risk. Results show that respondent's sexual practices place 15.1 % at low risk for HIV, 80.1% at medium risk for HIV and 4.8% at high risk for HIV (Figure 13). Further analysis indicates that there are no significant differences (χ^2 [2, 184] =2.321, p = .313) in level of risk for in school and out of school youth.

Figure 13. Level of HIV Risk



Source: KAP Survey of Corozal Youth 16 to 21 Years

CHAPTER 4

Discussion, Conclusion and Recommendations

Discussion

4.1.1 HIV Knowledge

One of the major limitations of the study is the response rate. Another limitation is that the majority of respondents were in school youth compared to out of school youth. Although the majority of respondents were in school youth, the overall majority of respondents were living in rural Corozal. Thirdly using a self-administered questionnaire dealing with sensitive issues, response bias could not be ruled out. However, response rate would not have been different given that a substantial number of the sample population required parental informed consent to participate. Although, the findings cannot be generalized to all youth in the Corozal District, the current study has obtained valuable baseline data on a very sensitive area of KAP regarding sexual behaviours among Corozal Youth 16 to 21 years of age.

The results of this study revealed that general knowledge related to HIV, knowledge related to HIV transmission and prevention were associated with formal education. It is thus interesting to note that while being in school showed a statistically significant positive influence on level of knowledge and HIV in general, how HIV is contracted and how to protect one's self from contracting HIV, young people in school experienced more pressure to have sex than their out of school peers and showed equally early initiation of sexual activity as out of school youth. A possible explanation may be that in school youth are in constant contact with peers while out of school youth are not.

Although respondents reported medium to high knowledge of HIV transmission and prevention, some misconceptions were also reported. For example, despite the absence of evidence that suggest that insects can transmit HIV infection, 41.7% of respondents believed HIV can be transmitted via mosquito bite. More than a third of the respondents believed that HIV transmission was possible through casual contact with HIV-positive persons, such as sharing food, cup or toilet. This percentage is very close to that found by Catzim (2011). An interesting misconception was that a person could be infected through supernatural means by a curandero or through obeah (30.1%). These percentages were lower than those determined by

the MICS 4 (SIB & UNICEF, 2012) in which 59.7% of the respondents identified the two most common misconceptions about HIV in Belize which are HIV can be transmitted by a mosquito bite or by supernatural means. As noted previously, approximately two thirds of the current study's respondent knew that HIV is not transmitted by a mosquito bite and by supernatural means.

This study showed that overall; respondents had a high level of tolerance toward HIV and people living with HIV. Again a statistical higher level of tolerance was associated with formal education: In school youth had a more positive and tolerant attitude towards HIV and people living with HIV than out of school youth. The percentage reported in this study was higher than that reported for the general population in the MICS 4 (SIB & UNICEF, 2012). A possible explanation for this higher tolerance level and medium to high knowledge of transmission and prevention may be the result of the intensive work of the National AIDS Commission, Department of Youth Services and National Drug Abuse Control Council with in school youth in the Corozal District.

4.1.2 Sexual Practices

Sexual practices are associated with risk for pregnancy, sexually transmitted infections (STIs) and HIV/AIDS (Ajmal, Agha & Karim, 2011). Above a third of the respondents (38.5%) reported not being sexually active, 58.1% admitted to being sexually active and 3.4% did not respond to this question. The percentage of non-sexually active respondents is much lower than the 68.7% reported the national profile in the MICS 4 (SIB &UNICEF, 2012). The number one reason for not having sex was fear of contracting the HIV virus. This may be a result of the medium to high knowledge of HIV transmission and prevention reported by respondents. Another common reason was based on morality. Respondents felt that having sex before marriage was wrong. Indeed in school youth felt stronger than out of school youth that having sex before marriage was morally wrong. As a result, the future plans for of those not having sex is to wait until marriage to do so. Evidently, moral values and perhaps religion play an important role in HIV prevention for Corozal District youth.

For the 58.1% respondents who reported being sexually active, the average age of first sexual experience was 16 years for both in school and out of school respondents. However, urban youth started at a younger age (15.8 years) than rural youth (16.3%). Since first sexual

partners were on average three years older than the respondents, were steady boyfriends/girlfriends and the majority of encounters were reported as occurring at boyfriend/girlfriend's home, first sexual encounters appear to be consensual. However, a small percentage (2.7%) of first experiences was indeed termed coercive by respondents. Only in school youth reported coercive first sexual experiences.

Although sexual activity is reported as consensual lifetime and in the last twelve months, coercive sexual experiences increased from 2.7% at first experience to 8.8% lifetime with in school youth appearing to be more vulnerable than out of school youth. The three most commonly reported sexual practices lifetime include oral sex, vaginal sex and anal sex. Only one third of the sexually active respondents have participated in only vaginal sex. The other two third have practiced a combination of vaginal and oral sex or vaginal and anal sex. In the last twelve months incidence of vaginal sex has increased compared to the lifetime category while the incidence of oral sex and anal sex has decreased in the last twelve months compared to the lifetime category.

Results of this study indicate that Corozal District youth are engaged in oral and sexual intercourse in addition to vaginal intercourse although the proportion appears to be low compared to that reported in international studies: oral sex (19.6%-78%) and anal sex [5%-54%] (Cherie & Berhane, 2012; Lindberg, Jones, & Santelli; Markham, Peskin, Baumer, & Tortolero, 2009). However the percentage of youth engaged in multiple sexual partnerships and the inconsistent use of condoms during such sexual encounters is a major concern. Currently sexually active youth have also received money or gifts in exchange for vaginal, oral and anal sex. Young people engaged in transactional vaginal, oral and anal sex are at high risk for STIs including HIV because they may be less able to negotiate and make decisions about the timing and conditions of sex with their partners (Cherie & Berhane, 2012; Gregson et al., 2002).Thus, sexual health education should include the dangers of oral and anal sex and the ways on how to protect oneself from STIs including HIV.

Vulnerable populations such as female sex workers (FSW), men having sex with men (MSM) and young people are of major concern in HIV prevention and transmission. Manzanero et al. (2012) found a 13.5% HIV prevalence in MSM with 3.3% of the participants reporting having been coerced into sex. Coerced sexual activity places youths at risk for STIs and HIV (Cherie & Berhane, 2012). The current KAP study is the first to identify MSM in youth in the

Corozal District. Similarly to Manzanero at al. (2012), young men in the Corozal District are having sex with the same sex. Indeed, 9 of the respondents indicated an MSM first sexual experience with 2 being coercive experiences. This trend appears to be the same in current sexual practices as 4.4% of youths reporting oral sex report MSM oral sex and 2.9% of youth reporting anal sex reported MSM anal sex. Of great concern is the reported low consistent condom use among youth who practice anal sex especially MSM.

Another area of concern is that young people use condoms less as they have sex over time. Condom use is as high as 60% at first experience and drops to 32% in the last 12 months. This low condom use in current sexual activities is consistent with previous Belizean studies (Catzim, 2011; Manzanero et al., 2012). The decrease in condom use may occur because the respondents may be more comfortable with their partners as the majority reported sexual partners whom they considered boyfriends/girlfriends.

Early sexual initiation, low/inconsistent condom use especially among those who have multiple sex partners and those engaging in oral and/or anal sex, incidences of transactional sex, and participation in sexual activity under the influence of alcohol and other drugs place Corozal sexually active youth 16 to 21 years at risk for STI's and HIV. When these indicators were used to measure risk for HIV for the sexually active youth studied, it was determined that the majority were at medium to high risk for HIV. There was no significant difference in level of risk for in school and out of school youth although HIV Knowledge of transmission and prevention were significantly associated with formal education. Clearly, knowledge is not translating into behaviour change or safer sexual practices in this population. The BSS (Manzanero et al., 2012) also found gaps in knowledge and behaviour. Although the BSS was with vulnerable populations, this particular finding of the current KAP study shows that knowledge is not influencing behavior change when it comes to young people's sexual practices. This needs to be addressed at this age group as this translates into risk that is carried into adulthood which is reflected in studies such as the BSS. Perhaps it is time to concentrate efforts in programs that address this issue. Programs based on the Transactional Model of Change developed by Proschaska, DiClemente and Norcass (1992) which highlights the complex, interconnected, mental processes that are necessary for behavior change to occur may be one step in translating knowledge into behavior change.

Although knowledge of transmission and prevention is not influencing behavioural change, it is encouraging that level of HIV knowledge is translating into attitudinal change. Verily, 87.7 % of the respondents indicated tolerance for persons living with HIV/AIDS. The percentage of in school youth was higher than the average and this was significantly higher than out of school youth. Formal education does influence attitude at least for this Corozal population.

Perhaps the most important indication of HIV risk for sexually active youth is consistent and proper use of condoms. Since condom use has proven to be inconsistent in Belize's sexually active populations and in this particular population, it was important to understand why although the majority of youth understand the importance of condom use, condom use is low. The number one reason for not using condoms was reported as not having one at time of sexual activity. This suggests that sexual activity is spontaneous, condoms may not be available, or respondents are ashamed of having condoms with them. This needs to be further investigated. Equally interesting and alarming is the second most common reason which is "I do not like using them" and the third most common reason "My partner does not like it". This is alarming as respondents admitted that they were the ones who initiated sexual activity. Obviously, if they do not like using condoms and/or their partner does not like using them, they are placing themselves and their partners at high risk.

It is important to note that more than half of the currently sexually active respondents who use condoms disclosed that they use condoms to prevent HIV infection. Although this is promising, the number one reason for using condoms was for prevention of pregnancy (80.8%). This implies that youth are concerned more with traditional faux pas and may not see themselves equally at risk for HIV infection. This may be a result of the adolescent years where biologically the brain is not fully developed and youth tend to think that they are invincible.

Conclusion

Mainly, results of this study indicate that youth between the ages of 16 and 21 years in the Corozal District are indeed sexually active, that within the sexually active population, vulnerable populations such as MSM exist, that sexual activity begins at an early age and that sexual practices such as unprotected vaginal, oral and anal sex, multiple partners, transactional sex and consumption of alcohol and other drugs place this population at risk for HIV and STI's.

Significant differences in sexual practices between in-school and out of school youth were not found. Hence, one can no longer hypothesize that Corozal District youth are somehow protected from trends that occur elsewhere in the country. This is demonstrated as findings reveal sexually active youth at medium to high risk for HIV even though knowledge of HIV transmission and prevention are high. Clearly, there is difficulty in applying knowledge to practicing safe sex.

Further, it is heartening that knowledge does translate to tolerance of people living with HIV/AIDS and that about a third of the respondents is not sexually active. This then places a third of the respondents currently at no risk for STI's and HIV. Of course, with young people this can change overnight.

Finally results of this study provide empirical evidence that validates the key reasons for HIV transmission identified by the National Strategic Plan to guide Belize's response to HIV from 2012 to 2016. These reasons include inconsistent condom use in the presence of multiple sexual partners, early sexual initiation, and transactional sex. The use of licit and illicit drugs can also be added to this list in reference to Corozal District Youth. Clearly, the NSP is cognizant of issues related to HIV transmission and prevention.

Recommendations

The analysis of the data collected in this study opens the door for many more targeted prevention initiatives in the National Response to HIV in Belize. The following are specific activities that the NAC/CCM Corozal Committee as well as other national partners working in prevention can implement making use of the new evidence provided by this study.

1. Adjust the amount and type of behaviour change interventions to increase condom use. This study exposed low rates of condom use among youth in Corozal that mirror low condom use among other sub-populations such as heterosexual singles, men who have sex with men (MSM) and female sex workers (FSWs). With condom use as low as 30%, partners must seek new ways of making their use more desirable. This can be done via "The Art of Condom Pleasure" workshops and marketing campaigns that will change the way we promote condoms from a necessary inconvenience to a desired pleasure tool.

2. Make condoms more accessible. Respondents in this study report that one main reason for not using condoms is that they did not have any at the time of sexual activity. Condoms can be made more accessible through point-of-sale marketing in the villages, widespread distribution of socially-marketed condoms at subsidized prices and more aggressive distribution via. hotels, brothels, schools, neighbourhood stores and so on.
3. Introduce a wider range of creative packaging for condoms. Belize can now import attractive and innovative packaging of condoms that will make them seem more desirable. Market tests in Belize have shown that the public has great interest in and desire for condoms that are packaged in creative wraps, containers, colours, and shapes. There are condom distribution companies that can package the condom in novel containers such as key chains, mini sachets, lollipops and even compacts or compasses. None of these packages are currently available in the country; therefore, this is an opportunity whose time has come.
4. In response to the fact that many schools in the Corozal District are not teaching the important facts about precursors to risky sexual behaviour, it is recommended that member agencies of the NAC/CCM District Committee provide sexual and reproductive health education to in-school youth after school. These sessions will cover the important topics such as: self esteem, healthy body image, healthy relationships for teenagers, how to say no, how to mitigate negative peer pressure and how to minimize alcohol use. This focus on precursors to risky sexual behaviour should become the core of all HIV prevention education rather than the simple procedures of safer sex.
5. Recognizing that one of the most frequently used locations for early sexual activity is a local hotel or motel, the NAC/CCM Corozal Committee can expand its prevention initiatives most effectively by conducting safe sex education for motel and hotel staff and to enter into agreements with the owners of such establishments to ensure that condoms are always available for purchase and to introduce safer sex messages in the rooms along with free condoms.
6. One new knowledge gap that this study exposes is among parents of teenagers. It is therefore advisable for the partner agencies in the National Response to create entire education sessions specially designed in Spanish and for low literacy levels that target parents. These sessions can make parents more aware of the precursors to risky sexual

behaviour among youth, the role they can play in delaying the sexual debut of their teenage children and ways they can help their children to be less risky.

7. When conducting sexual health education among young people, whether they are in school or out of school, it is now important to include advice on the dangers of early withdrawal as a method of sexual protection. This will decrease the chances of uninformed youth making the mistake of practicing early withdrawal, which can produce pregnancies or infection by a sexually transmitted virus.
8. The NAC/CCM Corozal Committee can also conduct two focus groups with representative samples of the target population covered in this study to increase understanding of their sexual behaviour and motivators. The first is a focus group to find out if there are cases of date rape since the responses suggest that there are high levels of pressure to have sex from friends and "boyfriends". The second focus group could be done with female sex workers to find out more about the age of their clients and whether their clients express an interest in using condoms or not. The results of both these focus groups can further guide the prevention initiatives of the Committee.
9. Replication of the study in other districts may help present a clearer picture of Belize youth between the ages of 16 and 21 years.

References

Ajmal, F., Agha, A., Karim, S. (2011). Knowledge, attitudes and practices (KAP) regarding sexuality, sexual behaviours and contraceptives among college/university students in Karachi, Pakistan. *Journal of College of Physicians and Surgeons Pakistan*, 21(3), 164-168.

Bandura, A. (1999). Social cognitive theory: An agentic perspective. *Asian Journal of Social Psychology*, 2, 21-41.

Beer, N. (2013). The need for youth access to sexual reproductive health services. [PowerPoint Slides]. Stakeholder consultation on proposed youth access to SRH services legislation. Belmopan.

Brecht, M., Stein, J., Evans, E., Murphy, D. A. & Longshore, D. (2007). Predictors of intention to change HIV sexual and injection risk behaviors among heterosexual methamphetamine-using offenders in drug treatment: A test of the risk reduction model. *Journal of Behavioral Services & Research,* 36(2), 247-264.

Catzim, A. (2011). *Baseline knowledge, attitudes and practices survey, 2011*. Belmopan: MOL.

Cherie, A. & Berhane, Y. (2012). Oral and sexual practices among high school youth in Addis Ababa, Ethiopia. *BMC Public Health,* 12 (1), 1-9.

Cleland, J. (2001). Illustrative questionnaire for interview-Surveys with young people. In J. Cleland, R. Ingham, & N. Stone , *Asking young people about sexual reproductive behaviours: Illustrative core instrument* (pp.31-57). New York: UNDP/UNFPA/WHO.

Day, M. (2011). *BSS SLU Survey Instrument.* Saint Lucia: The Caribbean Drug Abuse Research Institute.

Diclenture, R. J. & Peterson, J.L.(1994). Changing HIV/AIDS risk behaviours: The role of behavioral interventions. In R. J. Diclente & J. L. Peterson (Eds.), *Preventing AIDS: Theories and methods of behavioral intervention.* New York: Plenum Press

Fishbein, M. & Ajzen, I. (1981). Attitudes and voting behavior: An application of the Theory of Reasoned Action. In G. M. Stephenson & J. M. Davis (Eds.), *Progress in Applied Psychology: Vol.1* (pp.253-313). New York: John Wiley & Sons Ltd.

Gregson, S., Nyamukapa, C. A., Garnett, G. P., … & Anderson, M. A. (2002). Sexual mixing partners and sex differentials in teenage exposure to HIV infection in rural Zimbawe. *The Lancer*, 359, 1896-1903.

Lindberg, L. D., Jones, R., & Santinelli, J. S. (2008). Non-coital sexual actvities among adolescents. *Journal of Adolescent Health*, 43(3), 231-236.

Manzanero, M., Morales-Miranda, S., Alvarez, B. E., Arambú, N., Figueroa, W., & Perén, J. (2012). Central American behavioural seroprevalence survey of HIV and other STIs in more vulnerable populations: Sex workers, men who have sex with men and persons with HIV, Belize 2011-2012.

Markham, C. M., Peskin, F. M., Addy, R. C., Baumer, E. R., & Tortolero, S. R. (2009). patterns of vaginal, oral and anal sexual intercourse in an urban seventh-grade population. *Journal of School Health*, 79, 193-200.

Mercer, C. H. (2010). *Measuring sexual behavior and risk.* London: University College.

National AIDS Commission. (2012). *Getting to zero: Belize HIV Strategic Plan.* Belize City: Author.

Rampal, L., Mohammadi, M., Abdullah, M., Abdul Rahman, H. (2010). Knowledge, attitudes, and sexual behaviors related to HIV/AIDS prevention among Malaysian adolescents 2009. *European Journal of Social Sciences*, 17(3), 442-452.

Saewyc, E. M., Taylor, D., Homma, Y., & Ogilvie, G. (2008). Trends in sexual health and risks behaviors among adolescent students in British Columbia. *The Canadian Journal of Sexuality*,17(2), 1-13.

SIB (2011). *Census 2010*. Belmopan: Author.

SIB & UNICEF (2012). *Multiple Indicator Cluster Survey 4, Belize*. New York: UNICEF.

Tan, X., Pan, J., Zhou, D., Wang, C., & Xie, C. (2007). HIV/AIDS knowledge, attitudes and behaviors assessment of Chinese students : A questionnaire survey. *Int. J. Environ. Res. Public Health*, 4(3), 248-253.

Tanfmunkongvorakul, A., Carmichael, G., Banwell, C., Utomo, I.D., & Sleigh, A. (2011). Sexual perceptions and practices of young people in Northern Thailand. *Journal of Youth Studies*, 14(3), 315-339.

Taroabi, M. R. & Yarber, W. L. (1992). Alternate forms of the HIV prevention attitude Scale for teenagers. *AIDS Education and Therapy*, 4, 172-184.

Tenkorang, E. & Matica-Tindale, E. (2008). Factors influencing the timing of first sexual Intercourse among young people in Nyanza, Kenya. *International Family Planning*

Perspectives, 34(4), 1777-1888.

Vega, A., Maddaleno, M., & Marin, R. (2005). *Youth-centered counseling for HIV/STI prevention and promotion of sexual health: A guide for front-line providers.* Washington, D.C.: PAHO.

Appendix 1

MINISTRY OF HEALTH
Institutional Review Board
3rd Floor, East Block Building
Belmopan, Belize, Central America
Phone: 501-822-2325/2363, Fax: 501-822-2942

July 15th, 2013

Jean Perriott, PhD,
University of Belize
Belmopan Central Campus
University Drive, Belmopan
Tel: 822-3680/822-1000
Email: jperriott@ub.edu.bz

Re: Research Protocol "A Study of the Sexual Knowledge, Attitudes and Practices (KAP) of In-School and Out of School Youth between the Ages of 16 and 21 years in the Corozal District"

IRB Tracking 07/13(8)

Dear Dr. Periott:

The Institutional Review Board (IRB) of the Ministry of Health, Belize hereby approves the research protocol entitled ***A Study of the Sexual Knowledge, Attitudes and Practices (KAP) of In-School and Out of School Youth between the Ages of 16 and 21 years in the Corozal District*** to be executed as described in the submitted protocol and the subsequent amendments submitted June 3rd , 2013 and according to the conditions set out in the attached addendum.

Regards,

DIRECTOR HEALTH SERVICES
Signature/Name, Director of Health Services

AISHA ANDERSON
Signature/Name, Board Member

Adele Sheppard TA-HEALTH
Signature/Name, Board Member

J. Perriott
J Perriott
Signature/Name, Lead Investigator

Appendix 2

Informed Consent Form-Parents for subgroup-16 to 18 years in school youth

Informed Consent Form

(Parents)

I, _____, accept that my child

(Parent's Name)

who attends _____, participates in the project entitled:

(Name of High School/Junior College)

"*A Study of Sexual Knowledge, Attitudes and Practice (KAP) of High School, Junior College and Out of School Youth between the ages of 16 and 21 years in the Corozal District*" that is being conducted by the University of Belize in collaboration with the National AID Commission.

I declare that I understand and am in agreement with the following:

1. This project is fundamental in understanding the manner in which sexual practices are affecting adolescents and in proposing programs and policies so that governmental and non-governmental organizations/institutions that deal with these issues better their prevention, intervention and treatment practices.

2. The information that my child divulges shall be held in the strictest confidence and shall only be used for the purposes of this study.

3. To be able to participate in this study, my child shall (a) return this letter of informed consent signed by me to the investigator and (b) complete a questionnaire given at his/her high school or junior college.

4. There is no cost to me or my child for participating in the survey.

5. My child nor I will receive any direct benefits but the results will help others in the future as they will be used by the National AIDS Commission to help implement relevant strategies for harm reduction.

6. My child may feel some discomfort in answering certain questions as sexual practices is a sensitive issue to many young persons. In the event my child feels emotionally upset as a direct result of this research study, referral for counseling services at no cost to me shall be provided. In this event, my child or I should contact Dr. J. Perriott at 667-4583 or by e-mail at jperriott@ub.edu.bz

7. The results of the study will be analyzed, discussed and published in local, international scientific journals and/or specialized texts always maintaining confidentiality and keeping my child's identity anonymous.

_____ _____

Parent's Name Signature

Appendix 3

Informed Consent Form-Parents for subgroup-16 to 18 years not in school youth

Informed Consent Form (Parents)

I, _____, accept that my child _____
(Parent's name) (Name of Child)

participates in the project entitled: "*A Study of Sexual Knowledge, Attitudes and Practice (KAP) of High School, Junior College and Out of School Youth between the ages of 16 and 21 years in the Corozal District*" that is being conducted by the University of Belize and the National AIDS Commission.

I declare that I understand and am in agreement with the following:

1. This project is fundamental in understanding the manner in which sexual practices are affecting youths and in proposing programs and policies so that governmental and non-governmental organizations/institutions that respond to these social needs can improve the quality and quantity of the prevention services they provide to youths in Corozal District.

2. The information that my child divulges shall be held in the strictest confidence and shall only be used for the purposes of this study.

3. To be able to participate in this study, my child shall (a) return this letter of informed consent signed by me to the investigator and (b) complete a questionnaire given at his/her high school or junior college.

4. There is no cost to me or my child for participating in the survey.

5. My child nor I will receive any direct benefits but the results will help others in the future as they will be used by the National AIDS Commission to help implement relevant prevention strategies to protect youth in Corozal District.

6. My child may feel some discomfort in answering certain questions as sexual history may be a sensitive issue to some young persons. In the event my child feels emotionally upset as a direct result of this research study, referral for counseling services at no cost to me shall be provided. In this event, my child or I should contact Dr. J. Perriott at 667-4583 or by e-mail at jperriott@ub.edu.bz

7. The results of the study will be analyzed, discussed and published in local, international scientific journals and/or specialized texts always maintaining confidentiality and keeping my child's identity anonymous.

_____ _____
Parent's Name Signature

Appendix 4

March 20, 2013

Dear Respondent:

You are being invited to participate in a research study conducted by the National AIDS Commission (NAC) and the University of Belize (UB). The researchers include UB professors, NAC personnel as well as Ministry of Health, Ministry of Education and National Drug Abuse Control Council personnel. Very little research has been conducted on issues affecting youth in our country. This questionnaire has to do with knowledge, attitudes and sexual practices (KAP). Some of the questions are very personal. Because they are personal, there has been a reluctance to investigate them. However, if government organizations such as NAC are to provide excellent prevention and harm reduction programs, we need to know your views in regard to KAP even if we have to ask personal questions.

The objective of this research study is to determine knowledge, attitudes and sexual practices of youth between the ages of 16 and 21 years in the Corozal District in order to obtain information to formulate harm reduction strategies among youth. Your participation will consist of filling out the attached questionnaire which will take about 25 minutes. It is being given to youths between the ages of 16 and 21 years both in and out of school in the Corozal District. Your participation in this research study is voluntary and if you are not yet 18, you can only participate if your parents have signed the letter of informed consent. If you decide to fill out the questionnaire, you may refuse to answer certain questions or stop answering the questions at any point that you feel uncomfortable. Should you feel emotionally upset and need to speak to someone, counseling services shall be provided free of cost to you. Should you require these services, call Dr. Jean Perriott at 667-4583.

Please note that this survey is anonymous therefore, the necessary steps have been taken to safeguard your privacy. You do not need to put your name on the questionnaire. When you have completed the questionnaire, put it in the envelope that will be given to you, seal it and return it to the data collector. The data collected will only be seen by the researchers. The questionnaire will be destroyed after the project is completed and should the data collected be published, your identity will not be revealed.

By returning the completed questionnaire, you are indicating your willingness to participate freely in this research study. You are further indicating that all your present questions about research project have been answered in language you understand and that you understand that all future questions will be answered in a similar manner.

Thank you for considering this invitation to participate in this study.

Sincerely,

_____

Dr. Jean Briceño-Perriott

Principal Investigator

Appendix 5

KAP SURVEY OF COROZAL DISTRICT YOUTH BETWEEN THE AGES OF 16 AND 21 YEARS QUESTIONNAIRE 2013

A. DISTRICT	**B. QUESTIONNAIRE NUMBER**
COROZAL	

1. I am ☐ 1. In school ☐ 2. Not in school (Skip to #3)	**2. Type of School** ☐ 1. High School ☐ 2. Junior College(JC) **2. a. Year** ☐ 1. Third Form ☐ 3. JC First Year ☐ 2. Fourth Form ☐ 4. JC Second Year
3. Are you employed? ☐ 1. Yes ☐ 2. No **3a. If Yes, do you work** ☐ 1. Part-time ☐ 2. Full -time	**4. What is your ethnicity?** ☐ 1. African ☐ 2. Caucasian/White ☐ 3. Chinese ☐ 4. Creole ☐ 5. East Indian ☐ 6. Garifuna ☐ 7. Maya Kechi ☐ 8. Maya Mopan ☐ 9. Mennonite ☐ 10. Mestizo ☐ 11. Spanish ☐ 12. Other (Specify) _____
5. Where is your main residence located? ☐ 1. Rural Corozal ☐ 2. Urban Corozal	**6. Sex** ☐ 1. Male ☐ 2. Female
7. Age ☐ Years old	**8. With whom do you live? (You may tick as many options as necessary).** ☐ 1. Father ☐ 2. Mother ☐ 3. Brother/ sister ☐ 4. Stepmother ☐ 5. Stepfather ☐ 6. Grand Parent ☐ 7. Guardian ☐ 8. Other relative ☐ 9. Family Friend ☐ 10. Alone ☐ 11. Other (Specify)_____

Continued on the following page

9. General knowledge about HIV: (Put a check mark in the box that applies for *each* of the following statements. Respond to all)	**1 Yes**	**2 No**	**3 Don't Know**
1. I have heard of an illness called HIV/AIDS.			
2. A healthy looking person can have the AIDS virus.			
3. There are other diseases beside HIV that can be transmitted through sexual contact.			
4. Only certain groups of people can contract the AIDS virus.			
5. A person suffering from an STI has a higher chance of contracting the AIDS virus.			

10. People can get HIV from: (Put a check mark in the box that applies for *each* of the following statements. Respond to all)	**1 Yes**	**2 No**	**3 Don't Know**
1. Sexual intercourse without a condom.			
2. Sharing food with an infected person.			
3. Sharing infected needles.			
4. Sharing a toilet with an infected person.			
5. Receiving HIV infected blood.			
6. Sharing a cup with an HIV infected person			
7. A mosquito bite.			
8. Mother to child transmission(A pregnant woman infected with HIV can transmit the virus to her child during birth or by breastfeeding).			
9. Using obeah, curanderos or other supernatural ways.			
10. Exposure to infected blood or other body fluids.			

11. People can protect themselves from HIV by: (Put a check mark in the box that applies for *each* of the following statements. Respond to all)	**1 Yes**	**2 No**	**3 Don't Know**
1. Not sharing needles.			
2. Using herbs.			
3. Abstaining from sexual intercourse.			
4.Using obeah, curanderos or other supernatural ways			
5. With holding breast feeding for HIV positive babies.			
6. Protecting body from contact with others' body fluids.			
7. Having sex with a virgin.			
8. Only engaging in oral sex			
9. Taking a bath immediately after sex			
10. Using condoms correctly every time they have sex.			

Continued on the following page

12. Check the box next to each question that best describes your attitudes. (Respond to all)	**1 Strongly Disagree**	**2 Disagree**	**3 Undecided**	**4 Agree**	**5 Strongly Agree**
1.I am certain that I could be supportive of a friend with HIV.					
2.I am comfortable with the idea of using condoms for sex.					
3. I dislike the idea of limiting sex to just one partner to avoid HIV infection.					
4. It would be embarrassing to get the HIV antibody test.					
5. Using condoms to avoid HIV is too much trouble.					
6. People can influence their friends to practice safe sex.					
7. I would shake hands with a person with HIV.					
8.I would avoid sex if there is a slight chance that my partner might have HIV.					
9. If I were to have sex, I would insist that a condom be used.					
10. If I used drugs, I would not share needles.					
11. HIV education in schools is a waste of time.					
12. I believe that an individual who suffers from HIV/AIDS should be prohibited contact with family members.					
13. I dislike having contact with people living with HIV/AIDS.					
14. I am comfortable with sharing toilets with a person who has HIV/AIDS.					
15. I would buy food from a vendor if I knew that person was HIV positive.					
16. If a teacher was HIV positive, he/she should be allowed to continue teaching.					

13. Have you ever had sex? ☐ 1. Yes (*Skip to #17*) ☐ 2. No (*Go to following page, #14, 15, 16*)

Continued on the following page

This page is only for those who have not yet started sexual activity.

If you answered Yes to Question 13, go to the following page.

14. Youths may have mixed reasons for not having sex. Please tell us which of the following reasons apply to you. You may choose all that apply to you.	1 Yes	2 No	3 Not sure
1. I don't feel ready for sex.			
2. I have not had the opportunity.			
3. I think that sex before marriage is wrong.			
4. I am afraid of getting pregnant.			
5. I am afraid of getting HIV/AIDS.			
6. I am afraid of getting another sexually transmitted disease.			

15. Which one of the following statements best describes your future plans about sex? ☐ 1. I plan to wait until marriage. ☐ 2. I plan to wait until I am engaged to be married. ☐ 3. I plan to wait until I find someone to love. ☐ 4. I plan to wait until I finish fourth form/sixth form. ☐ 5. I plan to have sexual intercourse when the opportunity comes along.	**16. Do you feel pressure from others to have sex?** ☐ 1. Yes ☐ 2. No
16a. If yes, from whom do you feel pressure? Tick all that apply. ☐ 1. Friends ☐ 2. Classmates ☐ 3. Relatives ☐ 4. Girlfriend ☐ 5. Boyfriend ☐ 6. Other (Specify)_____	

Thank you for completing this questionnaire about issues that are sensitive to you.

If you answered Yes to Question 13, please fill the next section of the survey.

If you have never experienced sexual intercourse, you are finished with this survey.

PLACE THE COMPLETED QUESTIONNAIRE IN THE ENVELOPE AND GIVE IT TO THE DATA COLLECTOR.

If you feel you need to speak to someone, call 223-0356 and ask for Dr. Jean Briceño-Perriott.

17. The following questions are about the first time you had sex.	
17a. How old were you at the time? ☐ Years old	**17b. Your first sexual partner was** ☐ 1. Male ☐ 2. Female
17c. This person was ☐ 1. My boyfriend ☐ 2. My girlfriend ☐ 3. A stranger/relative/other person who forced me ☐ 4. A one night stand ☐ 5. Commercial sex partner ☐ 6. Other (Specify)_____	**17d. How old was this person?** ☐ Years old
17e. Was any of the following methods used to prevent disease/pregnancy? ☐ 1. Early Withdrawal ☐ 2. Condom ☐ 3. Morning after Pill ☐ 4. Herbal treatment ☐ 5. No method ☐ 6. Other (Specify)_____	**17 f. Where did it happen?** ☐ 1. Own room/house ☐ 2. Friend's room/house ☐ 3. Boyfriend/Girlfriend's room/house ☐ 4. Motel/Hotel ☐ 5. Relative's house ☐ 6. Other (Specify)_____

18. The following experiences refer to all sexual activity in your lifetime.	
18a. Some young people are forced to have sexual intercourse against their will by a stranger, a relative or an older person? Has this ever happened to you? ☐ 1. Yes ☐ 2. No (*Skip to #18c*)	**18b. How many different strangers, relatives or older persons have forced you to have sex against your will?** No. ☐ persons
18c. Some young people have "one night stands" perhaps after a party or after drinking. Has this ever happened to you? ☐ 1. Yes ☐ 2. No (*Skip to #18e*)	**18d. How many one night stands have you had?** No. ☐ one night stand/(s)

Continued on the following page

18 Continued. The following experiences refer to all sexual activity in your lifetime.	
18e. Some young people receive money or gifts in exchange for sexual intercourse. Has this happened to you? ☐ 1. Yes ☐ 2. No (*Skip to #18g*) **18f. With whom? Tick all that apply.** ☐ 1. Male ☐ 2. Female	**18g. Some young people pay money or gifts in exchange for sexual intercourse. Have you ever done this?** ☐ 1. Yes ☐ 2. No (*Skip to #18i*) **18h. With whom? Tick all that apply.** ☐ 1. Male ☐ 2. Female
18i. Have you used any of the following methods used to prevent disease/pregnancy? Tick all that apply. ☐ 1. Early Withdrawal ☐ 2. Condom ☐ 3. Morning after Pill ☐ 4. Herbal treatment ☐ 5. No method ☐ 6. Other (Specify)_____	**18j. Have you engaged in any of the following types of sexual activities? Tick all that apply.** ☐ 1. Vaginal Sex ☐ 2. Oral Sex ☐ 3. Anal Sex ☐ 4. Masturbating along with someone else ☐ 5. Group Sex (Number of people having sex together) ☐ 6. Masturbating alone ☐ 7. Other (Specify)_____
18k. Where do you and your partner (s) usually have sexual encounters? Tick the one that most applies. ☐ 1. Own room/house ☐ 2. Friend's room/house ☐ 3. Boyfriend/Girlfriend's room/house ☐ 4. Motel/Hotel ☐ 5. Relative's house ☐ 6. School ☐ 7. Other (Specify)_____	**18l. My sexual encounters happen during (Tick all that apply)** ☐ 1. School activities ☐ 2. Parties ☐ 3. After school ☐ 4. Other (Specify) _____

Continued on the following page

This section refers to your sexual activity in the last 12 months.

19a. Have you had vaginal sex in the last 12 months? ☐ 1. Yes ☐ 2. No (*Skip to #20a*)	**19b. Usually with whom did you have vaginal sex in the last 12 months?** ☐ 1. A one night stand ☐ 2. A friend ☐ 3. A steady girlfriend ☐ 4. A steady boyfriend ☐ 5. Sex worker ☐ 6.Other (Specify)_____
19c. With how many partners have you had vaginal sex in the in the last 12 months? ☐ 1. 1 partner ☐ 2. 2-5 partners ☐ 3. 6 to 10 partners ☐ 4. More than 10 partners	**19d. How often did you or your partner use a condom during vaginal sex in the last 12 months?** ☐ 1. Every time ☐ 2. Sometimes ☐ 3. Never (*Skip to 19f*)
19e. For what reasons have you used a condom in the last 12 months? Tick all that apply. ☐ 1. To prevent pregnancy ☐ 2. To protect myself from infections ☐ 3. To protect my partner from infection ☐ 4. To protect myself from STI/HIV/AIDS ☐ 5. To protect my partner from STI/HIV/AIDS ☐ 6. Other (Specify)_____	**19f. For what reasons have you not used a condom in the last 12 months? Tick all that apply.** ☐ 1. Regular partner objects ☐ 2. Paying partner objects ☐ 3. Cost too high ☐ 4. Do not like them ☐ 5. Do not have them with me ☐ 6. Do not think about it ☐ 7. Was offered money not to use it ☐ 8. I offered money not to use ☐ 9. Makes it look like I have AIDS/STI ☐ 10. Afraid to suggest use ☐ 11. Not macho ☐ 12. Other (Specify)_____
19g. Have you had vaginal sex after drinking alcohol in the last 12 months? ☐ 1. Yes ☐ 2. No ☐ 3. Sometimes	**19h. Have you had vaginal sex after taking other drugs in the last 12 months?** ☐ 1. Yes ☐ 2. No ☐ 3. Sometimes
19i. Who convinces the other to have vaginal sex? ☐ 1. I convince my partner ☐ 2. My partner convinces me	

Continued on the following page

20a. Have you had oral sex in the last 12 months? ☐ 1. Yes ☐ 2. No (*Skip to #21a*)	**20b. With how many partners have you had oral sex in the in the last 12 months?** ☐ 1. 1 partner ☐ 2. 2-5 partners ☐ 3. 6 to 10 partners ☐ 4. More than 10 partners
20c Usually with whom did you have oral sex in the last 12 months? ☐ 1. A one night stand ☐ 2. A friend ☐ 3. A steady girlfriend ☐ 4. A steady boyfriend ☐ 5. Sex worker ☐ 6.Other (Specify)_____	**20d. How often did you or your partner use a condom when having oral sex in the last 12 months?** ☐ 1. Every time ☐ 2. Sometimes ☐ 3. Never
20e. Have you received money/gift for oral sex in the last 12 months? ☐ 1. Yes ☐ 2. No **20f. Have you given money/gift to someone for oral sex in the last 12 months?** ☐ 1. Yes ☐ 2. No	**20g. Have you had oral sex with someone of your same sex in the last 12 months?** ☐ 1. Yes ☐ 2. No
20h. Have you had oral sex after drinking alcohol in the last 12 months? ☐ 1. Yes ☐ 2. No ☐ 3. Sometimes	**20 i. Have you had oral sex after taking other drugs in the last 12 months?** ☐ 1. Yes ☐ 2. No ☐ 3. Sometimes
20j. Who convinces the other to have oral sex? ☐ 1. I convince my partner ☐ 2. My partner convinces me	

Continued on the following page

21a. Have you had anal sex in the last 12 months? ☐ 1. Yes ☐ 2. No (*Finished. Follow instructions at the bottom of this page.*)	**21b. With how many partners have you had anal sex in the in the last 12 months?** ☐ 1. 1 partner ☐ 2. 2-5 partners ☐ 3. 6 to 10 partners ☐ 4. More than 10 partners
21c Usually with whom did you have anal sex in the last 12 months? ☐ 1. A one night stand ☐ 2. A friend ☐ 3. A steady girlfriend ☐ 4. A steady boyfriend ☐ 5. Sex worker ☐ 6.Other (Specify)_____	**21d. How often did you or your partner use a condom when having anal sex in the last 12 months?** ☐ 1. Every time ☐ 2. Sometimes ☐ 3. Never
21e. Have you received money/gift for anal sex in the last 12 months? ☐ 1. Yes ☐ 2. No **21 f. Have you given money/gift to someone for anal sex in the last 12 months?** ☐ 1. Yes ☐ 2. No	**21g. Have you had anal sex with someone of your same sex in the last 12 months?** ☐ 1. Yes ☐ 2. No
21h. Have had anal sex after drinking alcohol in the last 12 months? ☐ 1. Yes ☐ 2. No ☐ 3. Sometimes	**21 i. Have you had anal sex after taking other drugs?** ☐ 1. Yes ☐ 2. No ☐ 3. Sometimes
21j. Who convinces the other to have anal sex? ☐ 1. I convince my partner ☐ 2. My partner convinces me	

Thank you for completing this questionnaire about issues that are sensitive to you.

PLACE THE COMPLETED QUESTIONNAIRE IN THE ENVELOPE AND GIVE IT TO THE DATA COLLECTOR.

If you feel you need to speak to someone, call 223-0356 and ask for Dr. Jean Briceño-Perriott.