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EXECUTIVE SUMMARY

Jamaica Youth Risk and Resiliency Behaviour Survey 2006;
A Baseline Community-based Survey of Youth Aged 15-19

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Jamaica, a middle-level developing country in the Caribbean, recognizes the critical role of health in achieving socioeconomic and development progress, as outlined by the World Health Organization (WHO) and other multi-national and multi-agency organizations. This island country, along with the other similarly situated Caribbean countries, has seen significant transitions in its health profile over the last century, largely attributable to major demographic changes as well as economic, political and social developments. At present, the major contributors to Jamaica's health burden are chronic non-communicable diseases, HIV/AIDS, intentional and unintentional injuries and pockets of under-nutrition and its sequelae also persist. These issues constitute the major components of the nation's health policy. A major weakness in the local and regional health systems and service networks is the lack of efficient information systems which can collect, collate and present evidence for decision-making. Systems for surveillance, monitoring and evaluation are still underdeveloped and there exists the need to implement surveys in order to generate the information on which to base policy and develop programme responses.

Despite the demographic transition, Jamaica is classified at the intermediate stage of ageing, having a relatively young population with a median age of 24 years. The health status of the youth is therefore of critical importance to health policy and programmes. This is made even more imperative by the increasing body of literature which points to the significant impact of early life contribution to later health and disease status.

In this context, the Jamaica Youth Risk and Resiliency Behaviour Survey, a collaborative effort of the University of the West Indies (UWI), Mona, the Jamaican Ministry of Health (MoH), and United States Agency for International Development/Jamaica Caribbean (USAID/J-CAR), with technical assistance from the MEASURE Evaluation Project, was implemented. Information was gathered from 1318 participants (599 males and 721 females) island-wide who were representative of the 15 – 19 year old population stratum, (598720). Data analysis was weighted to yield population parameter estimates.

The main objectives of the survey were to:

i) Describe lifestyle and behaviour patterns (exercise, cigarette smoking and alcohol consumption) by demographic and socio-economic characteristics;
ii) Determine and document the context of adolescent reproductive and sexual health, including the magnitude, determinants and consequences for adolescents' lives;
iii) Determine the association between resiliency and markers of abnormal mental health on risk-taking behaviours, including involvement in violence;
iv) Obtain anthropometric measurements, fasting glucose levels and cholesterol levels in youth and relate these to chronic disease risks; and
v) Identify the sources of information influencing adolescents' health and health seeking behaviour.

Methodology and Data quality

Jamaican youth in the 15-19 year old age category were selected by cluster sampling using one or more contiguous enumeration districts (EDs) as primary sampling units (PSUs) during the community survey. Fifteen participants were selected from each of the 88 PSUs completed an interviewer-administered questionnaire, provided anthropometric and blood pressure measurements and supplied a finger-stick sample of blood for estimation of fasting glucose and cholesterol levels. In addition to pre-fieldwork training and certification of interviewers and periodic calibration of field instruments, data quality was assessed via duplicate measurements made by supervisor and interviewer. Evidence of good data quality measures in place included low non-response rates, the maintenance of excellent inter- and intra-observer reliabilities throughout the survey, and the absence of digit preference.

Socio-demographic Status

Approximately 20.0% of adolescents interviewed in the survey reported that they did not live with a biological parent within their household and 50.0% lived with one parent only (40.0% with mother, 10.0% with father). The majority of youth had access to running water and 72.0% had a water closet for sewage disposal. There was relative crowding within the homes as marked by an index of 1.3 persons per habitable room. The possession of nineteen household items was used to assess socio-economic status (SES) and 15 were used to discriminate between the SES groups. Sixty-five percent of youth had 6 or more of these items in their homes, with a higher proportion among urban compared to rural youth (70.5% vs. 58.8%).

Education and Schooling

Sixty-five percent of adolescents aged 15-19 were in school at the time of the survey while 2.5% reported having either no schooling or only primary school education. Approximately 15.0% of youth currently in school reported having reading problems, which was significantly higher among males (19.5%) than females (10.1%). Forty percent of in-school students had problems with home work and 8.0% were in special classes for learning problems, with no significant sex differences. Over 28.0% of adolescents are currently two or more years behind their expected level of schooling and over 1.0% (representing approximately 2,500 nationally in this age group) is five or more years below the expected level of schooling. The survey findings also revealed that the likelihood of ever having sex (OR 0.38; 95% CI 0.16-1.19) and having been involved in violence (OR 0.2; 95%CI 0.1-0.6; $p<0.01$) decreased with educational attainment beyond primary school.

Physical Activity, Dietary Practices & Self Perception

The majority of Jamaican youth participate in low to moderate physical activity, though significantly more males participated than females (77.5% vs. 61.2%).Most 15-19 year old youth fail to meet the recommended fruit and vegetable intakes, however in contrast they either often and/or excessively consume pastries and sweetened beverages. Frying remains the most frequent method of protein preparation among 55.5% of respondents.

The majority of youth perceived a normal body silhouette as being healthy and attractive, but just under half of respondents classified themselves correctly with respect to their measured BMI category. The most frequent occurrence of misclassification between perceived and measured BMI was among those who perceived themselves to be underweight but actually fell within normal or overweight measured BMI.

Medical History and Health Seeking Behaviour

Chronic medical illnesses are infrequent in this age group. Asthma is the most commonly reported health condition (10.0%) followed by broken bones (5.0%). Less than 10.0% of youth report frequent visits to health facilities. Private care is preferred by the largest proportion (42.9%) with no urban-rural differences in this preference. Medication use is infrequent according to respondents with the exception of those who report an asthmatic condition, and between ten and fifteen percent of youth took iron and vitamin supplements respectively.

Emotions and Mental Health

The majority of youth are happy most of the time (67.9%) with significantly more males than females reporting they have been happy in the past year (71.6% vs. 64.1%). However, sixteen percent of youth reported having symptoms of depression with significantly more females (21.3%) than males (9.7%) falling in this category. Feelings of loneliness, sadness or wanting to cry in the past month were reported by 14.0% of adolescents, again with significant sex differences (males 7.7%; females 19.9%; $p<0.001$). Six percent of youth reported having had suicidal ideations (males 2.8%; females 9.7%; $p<0.001$) and three percent have attempted suicide (males 1.4%; females 5.0%; $p<0.001$). Depressive symptoms are associated with increased involvement in sexual activity and pregnancy among females and; with forced and unwanted sexual activity among males. Depressive symptoms for both sexs are also associated with involvement in violence and the use of illegal drugs.

Adolescents who live with both biological parents report less depression and persons with learning problems exhibit more depressive symptoms. Sixty-seven percent of respondents never had thoughts of hurting or killing someone, a third sometimes thought about it and 2.0% entertained these thoughts all the time with no differences between the sexs. Approximately one in ten youth report they are usually or always angry.

Resiliency and Risk

Resiliency can be defined as any characteristic or factor which protects a person from engaging in risky behaviour. Protective factors include parental and family caring, parental connectedness, parental expectations for school performance and parental availability. Eighty four percent of households reportedly had adults with high expectations of the youth and 53.0% of households had adults who were perceived as providing a caring relationship within the home. Though parental presence by itself was not a protective factor from risky behaviour (violence,

drunkenness, cigarette smoking, sexual activity), high parental expectations was protective against sexual involvement and was associated with increased condom use.

Although fifty percent of respondents reported having caring relationships inside the home; 83.7% reported having an adult inside the home that had high expectations of them. The results indicate that most of our youth do not feel that they have caring relationships inside the home even though there are high expectations of them. Resiliency factors as reported in the survey however were shown to be protective against risk behaviours.

Physical Abuse and Violence

Involvement in violence (as perpetrator or victim) was reported by twenty percent of youth, with males 40.0% more likely to be involved in violence than females (OR 1.39, 95% CI= 1.10-1.76). Injuries sustained by 15-19 year olds were most frequently due to falls (22.2%), affecting both males and females equally. Broken bones (31.7%) and cut/stab wounds (29.2%) were the most prevalent types of injuries reported. These injuries also showed opposite sex preponderance, with broken bones more frequent among males (35.6% vs. 25.5%) and stab wounds more prevalent among females (19.2% vs. 44.7%). The most common weapon carried by youth is a sharp instrument such as a knife, ice-pick or scissors. The presence of both parents in the home compared to a single parent of either sex was associated with a reduced proportion of youth who report involvement in violence from 20.0 % to 14.0 %,) but this appears to be due entirely due to a reduction among males as the estimate among the females actually increases.

Alcohol, Tobacco and Drug Use

Sixty-one percent of adolescents had drunk some form of alcoholic beverage and 48.9% had alcoholic drinks in the last year. Among those adolescents who have ever had a drink, more males10.0%, than females, 6.0%, reported becoming drunk in the past year ($P< 0.001$). Approximately five percent of respondents were current smokers, which was significantly higher among adolescent males (7.3%) compared to females (3.0%).

Approximately eleven percent of adolescents currently use marijuana, which was significantly higher among males than females. Reported use of marijuana increased among older youth. Adolescents who reported use of marijuana in the past twelve months were approximately ten times more likely to have ever had sex than those adolescents who did not use marijuana (OR 9.63 95% CI= 4.92 – 18.86). With the exception of marijuana there were no reports of any illegal drug use. Higher socio-economic status and educational attainment was associated with a lower prevalence of ganja drug use.

Sexual Behaviour

Fifty-nine percent of adolescents reported ever having sexual intercourse. This was significantly higher among males (68.9%) than among females (49.1%; $p< 0.01$). Among sexually active adolescents, the median age at first sex was 13.0 years for males and 15.5 years for females. Approximately 4% of adolescents who had reported ever having sexual intercourse stated that their first sexual encounter was unwanted; the participant was either forced or while disagreeing, did not protest to the perpetrator. Sexual activity increased with age and the majority of sexually

active adolescents (83.7%) used a condom during the last sexual act. Approximately four times more females reported being pregnant (25.0%) compared to the proportion of males (6%) who reported impregnating a female. Less than 50.0% of youth were concerned about contracting HIV/AIDS (45.9%), being or getting someone pregnant (35.7%), and being sexually abused (17.6%). A teenager with an adult in their life who has high expectations of them, whether inside or outside the home, is less likely to engage in sexual activity (OR 0.36; 95%CI 0.25-0.53 $p<0.001$, adult inside the home; OR 0.64; 95%CI 0.47-0.88; $p= 0.006$ adult, outside the home)). The most common sources from which youth learnt about sex included schools (80.8%), friends/peers (47.4%), and via the electronic media (45.4%).

Sources of Information on Health

The main sources from which adolescents receive information are schools (66.0%), parent or family members (49.0%), and television (43.0%). However this indicator varied with age, as older adolescents more frequently reported television (44.5%) as their primary source of information while younger adolescents reported schools as their primary source (43.1%). All adolescents, regardless of age, reported a preference to obtain health information from health workers (36.0%), television (32.0%), and schools (32.0%).

Chronic Non-Communicable Diseases

The study revealed that twenty-five percent of youth are overweight or obese, with significantly more females falling into that category (males 19%; females 31.2%). Significant differences were also seen with regard to nutritional status and geographic distribution, with adolescents in urban areas 1.6 times more likely to be overweight or obese than their rural counterparts. The prevalence of prehypertension was found to be 29.0% among youth (males 35.0%; females 23.0%; $p<0.01$), there was a 2.0% prevalence of diabetes and ten percent reported a history of asthma. Hypertension and prehypertension were significantly associated with obesity in female youth but not in male youth. High physical activity, counter-intuitively, appears to be associated with pre-hypertension in males but this association may be confounded by the relationship between activity and sex. Also activity may not be the most important determinant of BP in male youth.

Conclusion

This study has provided important data on the health status, health seeking behaviour, risk and resiliency factors affecting Jamaican youth. Protective factors, such as improved educational levels, parental involvement and expectations, and positive mental health trends should be augmented in order to improve reproductive and sexual health outcomes, reduce risky behaviors, and inform subsequent adolescent health policy and programmes.

CHAPTER 1

INTRODUCTION AND BACKGROUND

Adolescent health has been a topical issue in developed countries for several decades but it has not received as much attention in developing countries (1). Violence and early sexual debut are important regional issues (1) and a similar situation exists in North America (2;3). Recognized risk factors, or factors that increase the likelihood of engaging in risky behaviours such as violence, risky sexual behaviour and suicide, include school problems, alcohol use, ganja (marijuana) use, carrying weapons and violence perpetration (3). Protective or resiliency factors, i.e. factors which promote healthy behaviours and decrease the likelihood of engaging in risky behaviours include parental and family caring and connectedness, parental expectations for school performance, parental availability and school connectedness (2). Successful interventions have included strengthening family and educational involvement, expanding economic opportunities, and supporting youth development (2). There are inadequate data from Jamaica, and indeed throughout the region, on the protective or risk factors that should be augmented or decreased respectively, or even which interventions are most effective in the Jamaican context.

At the same time, an epidemiologic transition in the region has resulted in chronic non-communicable diseases becoming the leading cause of death in the region (4-6). There is a burgeoning body of literature supporting the hypothesis that chronic non-communicable diseases have their origins in early life , including intra-uterine life and infancy (7), making it imperative that studies of adolescent health include not only reproductive health issues, exposure to injuries, and use of illegal substances but must also explore early markers of chronic non-communicable disease risk. The data also suggests that mental health should be prioritized within health programs for adolescents and young adults. While the literature on resiliency against violence and risky sexual behaviour is increasing, that on chronic non-communicable disease resiliency factors is almost non-existent. This study is aimed at filling some of this knowledge gap.

1.1 Reproductive Health

In Jamaica, age at sexual initiation is early. Among males age 15-19 years, over 90.0% have had sex (8). In 2001, the mean age at first sexual intercourse among sexually experienced males age 15-19, was 13.2 years and for females it was 15.2 years (9). Jamaica has one of the highest rates of adolescent fertility in the Caribbean (10) and by the age of twenty years, 40.0% of Jamaican women have been pregnant at least once with 80.0% of these pregnancies unplanned (11). This implies a high prevalence of teenage pregnancy. Moreover, adolescents and young adults suffer disproportionately from sexually transmitted infections and HIV/AIDS in particular. The national HIV/STD control program estimates that 10-14 year old girls have a twice higher risk than 15-19 year olds, and a thrice higher risk than boys of similar age group of acquiring HIV infection (12). Given the negative outcomes associated with early and unprotected sex, there is a need to better understand the risk and protective factors associated with these behaviours, in order to support the development of programs to delay sexual initiation, and encourage the use of condoms and other birth control methods, and inform policy development and interventions.

1.2 Injuries and Violence

Perpetrators and victims of crime and violent acts are mostly young men. In 2002, adolescent males accounted for 22.0% of total visits and 24.0% of injury visits to the accident and emergency (A&E) departments of all government hospitals (13). In 2000, of male adolescents 10-18 years, 22.0% reported carrying weapons and 17.0% were involved in a gang (14). As adolescent males make up less than 10% of the total population, they are disproportionately affected by violence. The 2005 *National Security & Justice Department* report revealed that 40.0% of crimes were committed by persons less than 24 years old, and 98% of these were perpetrated by males. During the same period, of the 1,541 persons 15-24 year old arrested for major crimes, 1,522 of these were male (15).

In 1998, 31.0% of all suicides in Jamaica were amongst youth 15-24 years old. Between 1996 and 1998, suicide rates doubled for all ages. Overall 11.0% of Jamaican youth 15-24 contemplated suicide at least once and 3.0% attempted it multiple times (16).

In 2000, a school-based sample showed that 12.0% of respondents reported attempting suicide whilst 68.0% admitted drug use(14). Information on the frequency and trends in these conditions is needed to better develop comprehensive programs to support healthy lifestyles among youth. The data also suggests that mental health should be given priority within health programs for adolescents and young adults.

1.3 Drug and Substance Abuse

Monitoring tobacco use and preventing smoking among adolescents is also important as tobacco is often considered a gateway to the abuse of other harmful substances. In addition, tobacco use in adolescence leads to a greater likelihood of tobacco addiction and long-term use, increasing the risk of lung cancer and other tobacco-related chronic diseases. Drug use as reported by adolescents aged 10-18 years adolescents in 2000 was 6.5% for steroids, 6.0% marijuana and 1.2% cocaine use(14). Alcohol is widely used and is readily available and inexpensive. Alcohol abuse by youth and its link to motor vehicle accidents is a problem for many countries in the Caribbean and alcohol abuse also increases the risk of hypertension and heart disease. Among Jamaican adolescents, use of liquor in the past year was 47.8%; and 11.2% reported that parents had drinking problems (14).

1.4 Chronic Disease Risks

Chronic non-communicable diseases are now the leading causes of morbidity and mortality in middle-income countries like Jamaica. This is consistent with the epidemiological transition which has been taking place over the last 40-50 years (6;17;18). Factors contributing to this transition include increasing wealth and food security, decreased physical activity, and increasing sedentary lifestyles, all of which are reflected in an increasing prevalence of obesity (19).

The relationship between food consumption patterns and the occurrence of these diseases have been well documented (20). Moreover, the association between blood cholesterol levels and the risk of coronary heart disease and that between the consumption of fruits and vegetables with certain cancers has also been well established (21;22).

Lifestyle habits such as the level of exercise, smoking, and alcohol consumption, among others, have been identified as risk factors for these diseases and it is known that atherosclerosis begins early in life and is amenable to amelioration in youth. Obesity is also highly correlated with the onset of diabetes, hypertension, and cardiovascular disease(CVD) (23;24). There is presently a dearth of data on chronic disease risk factors in the Jamaican adolescent population.

Understanding which adolescents are at greatest risk of eating poorly, not exercising enough, or having high blood pressure, blood glucose and cholesterol levels, will permit the development of early intervention programs to prevent the long-term impacts of these negative behaviours that tend to be adopted during the adolescent years.

1.5 Resiliency

Resiliency can be defined as any characteristic/factor which protects persons from engaging in risky behaviour which include early unsafe sexual activity, violence, and ganja (marijuana) smoking. It should also extend to behaviours which can protect from other health risks including obesity and chronic non-communicable diseases. Studies have highlighted resiliency and risk factors associated with violence and aggressive behaviour in Jamaican 12-16 year olds (10;25). Risk factors included childhood exposure to violence, television viewing, lack of organized activities, and low levels of literacy; while church attendance and caring mothers or fathers were regarded as protective factors. Research on resiliency in Jamaica among 10-18 year old showed that adolescents who thought that their mother cared and/or attended religious services were more resistant to early risky sexual behaviour. It was also observed that having both caring parents at home was a protective factor against suicidal ideations (1).

This study seeks to develop a more thorough understanding of risk and protective factors among a nationally representative sample of youth ages 15-19; specifically: 1) whether family, school, community, and peer level resiliency factors vary throughout Jamaica (e.g., rural versus urban areas); 2) whether certain levels of resiliency are more important in the 15-19 age range; 3) how resiliency factors differ between in-school and out-of-school youth; and 4) ways to strengthen these supportive influences at varying ages to encourage healthy lifestyles throughout the adolescent years for all Jamaican youth.

1.6 Purpose & Rationale

Lifestyle habits are recognized as having an important influence on health. High risk lifestyle and behaviours have been reported in the Jamaican society where tobacco and ganja smoking, alcohol consumption, unsafe sexual practices, inactivity, and poor diet are prevalent even in adolescence (26;27). These habits have been associated with adverse outcomes including intentional and non-intentional injuries, aggression, inappropriate sexual behaviours, obesity and other chronic diseases. These and other lifestyle issues have now begun to have a significant impact on the country's health profile resulting in an increased burden on the health resources. For example, injuries now represent a leading cause of hospital emergency room visits and there is increasing concern about sexually transmitted infection including HIV/AIDS, early and unplanned pregnancies and increasing obesity and sedentary lifestyle which are harbingers of chronic non-communicable diseases (11;12;28). Identification of health risks and effective interventions during adolescence is likely to ameliorate these problems and provide a long-term benefit to the nation's health care system, productivity and wealth. The age group 10-24 years represents approximately 30.0% of the Jamaican population, but receives disproportionately low attention with respect to its health status (1). With the changing patterns in disease profile and behaviour patterns, up-to-date information is required to inform effective interventions. The 2006 Jamaican Youth Risk and Resiliency Behaviour survey is aimed at providing timely information on these issues.

1.7 Research Objectives

The primary objective of the community-based survey is to determine health status, nutritional status, burden of risk factors, and lifestyle behaviours of adolescents aged 15-19 in a nationally representative sample in Jamaica and analyze these indicators within the context of relevant demographic, socio-economic, and resiliency factors.

Specific Objectives

- Describe lifestyle and behaviour patterns (physical activity, cigarette smoking and alcohol consumption) by demographic and socio-economic characteristics.
- Determine and document the context of adolescent reproductive and sexual health, including the magnitude, determinants and consequences for adolescents' lives.
- Determine the association between resiliency and markers of abnormal mental health on risk-taking behaviours, including involvement in violence.
- Estimate markers of chronic non-communicable diseases (CNCD) risk among youth by obtaining anthropometric measurements, fasting glucose levels and cholesterol levels and identify factors associated with CNCD risk profile.
- Identify the sources of health information influencing adolescents.
- Identify effective interventions to address the issues exposed through the study.

CHAPTER 2

METHODS

2.1 Context

The Adolescent Healthy Lifestyles Project

The USAID/J-CAR-funded Adolescent Healthy Lifestyles Project seeks to promote healthy lifestyles among children 10 to 19 years old (29). The project is designed to support the efforts of the Jamaica Ministry of Health (MOH) to address challenges faced by the nation's youth in the areas of reproductive health, substance abuse, crime, and violence. The project also aims to identify early markers of chronic non-communicable cardiovascular risk, a subject of particular interest to the Epidemiology Research Unit (ERU) of the Tropical Medicine Research Institute. The three areas of family (sexual) health, violence and trauma, and chronic non-communicable disease have been identified for specific attention in the Ministry of Health Healthy Lifestyle Project.

Implementation of 15-19 Community Survey

The project, implemented by a joint team from the Epidemiology Research Unit and the Ministry of Health, was executed in two parts: a survey of in-school 10-15 year old youth which was completed and reported (30) and a community survey of 15-19 year old youth.

The design of the community survey (ages 15 – 19) was similar to Ministry of Health's Healthy Lifestyles community-based survey (ages 15-74) that was undertaken in 2000. The content of the questionnaire for the 15-19 survey overlaps with both the Healthy Lifestyles Survey and the Risk and Resilience Survey (10-14). This study is a collaborative effort between the Ministry of Health, UWI and USAID/J-CAR, with technical assistance from the MEASURE Evaluation Project at the University of North Carolina at Chapel Hill and Tulane University in Louisiana.

2.2 Study design and sample selection

Sample size determination

In 2003, there were 250,352 persons in the 15-19 age groups, which represent approximately 10% of the Jamaican population. A sample of 1,185 participants adequately provides a reliable estimate of the prevalence of obesity (assuming a 4.0% prevalence) and allowing a +/- 2.0% error at the 95.0% level of significance and with 90.0% power (Intercooled Stata v. 9.0) Based on an expected refusal rate of 10.0%, the adjusted sample size is 1,320.

Sampling design and survey procedures

The Statistical Institute of Jamaica (STATIN) sample frame which takes into consideration the demographic characteristics of the country was used. Jamaica is divided into fourteen parishes which are further subdivided into over 5000 enumeration districts (EDs) each consisting of up to four hundred dwellings. An ED is defined as a geographical area to be enumerated by a single enumerator. Small contiguous adjacent EDs (less than 100 dwellings) are amalgamated to form a Primary Sampling Unit (PSU) for the purposes of national surveys. The country is also divided into 254 Sampling Regions containing similar dwellings (e.g. urban or rural) and which do not

cross parish boundaries. STATIN creates a sampling frame by selecting two (2) PSUs by probability proportionate to size (PPS) from each Sampling Region, yielding 508 PSUs nationally. These 508 PSU (approximately 10.0% of EDs) are used as the sampling frame for most surveys. This sampling frame is refreshed every three to four years.

The study is a cross-sectional, interviewer-administered survey. Adolescents within the ages of 15-19 years were recruited to participate via a two-stage systematic sampling design by first selecting PSUs from each parish and second, selecting households within each PSU. Fifteen participants were recruited per PSU in order to obtain the best efficiency between the number of participants per cluster (PSU) and national representation of the clusters (PSUs) chosen. A sample size of 1,320 participants required 1320/15 (i.e. 88) clusters. The sampling fraction of 88/508 was used to calculate the number of PSUs to be selected for each parish, as shown in Table 2.1.

Table 2.1: Urban Rural Distribution of the Selected Enumeration Districts, Jamaica, 2006

Parish	**# Urban**	**# Rural**	**Total # PSUs**
Kingston	4	0	4
St Andrew	16	2	18
St Thomas	0	4	4
Portland	0	2	2
St Mary	1	3	4
St Ann	2	4	6
Trelawny	1	1	2
St James	4	2	6
Hanover	2	0	2
Westmoreland	3	3	6
St Elizabeth	0	4	4
Manchester	1	5	6
Clarendon	2	6	8
St Catherine	12	4	16
Total	48	40	88

Recruitment Process

Within each PSU, 15 households were systematically selected at intervals determined by the number of households in the PSU; for example, at total number of 300 households in a PSU would result in every 20th household (300/15) being targeted for recruitment. The scheme chose a random starting point and worked systematically from that starting point. For each household selected, one

adolescent aged 15-19 was eligible for interview. If there were more than one eligible adolescent in the household, the respondent to be interviewed was randomly selected using coloured beads, each representing one eligible respondent. If there were no eligible respondents in the selected household then the interviewer would move on to the next eligible household and the sequence continued in a circular pattern inward until the list was depleted. If an adequate number of respondents were not obtained on the first round of recruitment, then the sequence was restarted. To reduce the incidence of over-recruitment near to the starting point (*starting point bias*), reserve households selected by the coordinating office were available for another round of the recruitment. This process continued until the requisite numbers of respondents were obtained or the PSU was exhausted, whichever came first. If the PSU was exhausted and the required number of participants was not recruited, an adjoining ED was identified by STATIN to complement the PSU. A number of selected PSUs had undergone social and demographic changes since the last census in 2001 and were now unsuitable for the following reasons:

- Inadequate numbers of eligible respondents;
- Inaccessibility of EDs;
- Sporadic incidents of violence.

Table 2.2 shows the adjustments required by parish, with St Andrew and St Catherine requiring the largest number of additional EDs (ten and seven respectively). The EDs obtained were used to complement the existing ones and therefore PSUs of up to three EDs were formed. The only area that replacement EDs were required was Portland where the two EDs selected were inaccessible.

Table 2.2 Additional Enumeration District Requirements for Each Parish, Jamaica, 2006

Parish	**Assigned no. of PSUs**	**Additional EDs**
Kingston	4	0
St Andrew	18	10
St. Thomas	4	0
St Catherine	16	7
Clarendon	8	0
Manchester	6	0
St Elizabeth	4	2
Westmoreland	6	0
Hanover	2	0
St James	6	0
Trelawny	2	0
St Ann	6	1
St Mary	4	1
Portland	2	2
Total	88	23

2.3 Recruitment and Training of Staff

Supervisors and field staff were recruited from a pool of experienced interviewers, most of whom had previously worked for STATIN. The members of the field staff were trained and received certification after a three-day period of learning questionnaire administration, anthropometry and blood pressure measurements and how to obtain blood glucose and cholesterol measures from finger-stick blood samples.
The training focused on the following areas:

- Survey procedures – included role-playing on how to introduce the survey to prospective participants.

- Questionnaire administration – included detailed examination of each question and a practice interview session in triads [interviewer-respondent-observer]. Each triad reported on issues within the group and the relevant adjustments to the questionnaire were noted and made.

- Map Reading- a STATIN representative trained the group in map reading. Procedures in surveying an ED were outlined in order to reduce bias in household selection.

- Anthropometry and blood pressure demonstration sessions were held as well as practical exercises in which the trainees went through the process of blood pressure, weight, height, and waist & hip circumference measurements.

- Recognition of emotional/mental health problems. A consultant psychiatrist provided guidelines for referring affected participants.

- Blood cholesterol and glucose testing using the Accutrend GCT machine – after demonstration sessions, all interviewers were trained on the finger-prink technique to obtain a blood sample, the use of the machine and, interpretation of the results.

- Random selection of participants within households where there were more than one eligible respondent was explained and practiced.

2.4 Areas Covered in the Questionnaire

The questionnaire covered the following major areas:-

1. Demographic information
2. Information on school activities
3. Physical activity
4. Dietary behaviour
5. Perception of self
6. Medical care
7. Emotions and mental health, including perception of self
8. Resiliency
9. Violence and unintentional injuries
10. Alcohol, tobacco and drug use
11. Sexual behaviour
12. Sources of information

The questionnaire also included the following physical measurements:

1. Blood pressure
2. Anthropometry – height, weight, waist & hip circumferences
3. Capillary fasting blood glucose and cholesterol

Validation of the final questionnaire was done during the pre-testing phase of the survey in April 2006.

2.5 Project Team

The Project Team was comprised of: at least two interviewers per parish, six team leaders, four regional supervisors, data entry clerks, a data coordinator, an assistant project coordinator, a project coordinator, a biostatistician and the principal investigator and co-investigators.

2.6 Field Protocol

The fourteen parishes in Jamaica are grouped into four health regions by the Ministry of Health as shown below (with one modification with respect to St. Thomas):

- Region 1(Southeast):- Kingston & St Andrew, St Catherine
- Region 2 (Northeast):- St Thomas*, St Ann, St Mary, Portland
- Region 3 (South):- Clarendon, Manchester, St Elizabeth
- Region 4 (West):- Westmoreland, Hanover, St James, Trelawny

**St. Thomas is normally in the Southeast Health Region*

A regional supervisor was assigned to each health region with specific responsibility for the management of the data collection and quality control checks. (*Appendix 1*)

Enhancing communication and recruitment

A press release was issued by the print and electronic media and the UWI Public Relations Department. Cooperation by communities was encouraged via the public media, including radio interviews with the investigators. Communication within the team and between the field team and the coordinating centre was facilitated by a group cellular telephone network.

Ethical Issues

A confidentiality form was signed by each interviewer upon completion of training. Written informed consent was obtained from each participant in the study or a guardian.

Measurements
The questionnaire was administered at recruitment and in most cases; the anthropometry and blood pressures were also completed at that time. An appointment was made for a second visit to revisit the participant at a convenient time following an overnight fast in order to complete the blood glucose and cholesterol readings. There were occasions however when appointments were made and the respondent was either not home or had eaten, necessitating three or more visits to complete the questionnaire.

Referrals
All respondents who were recognized as having emotional problems according to the guidelines (*Appendix 2*) were referred to the psychiatrist for assessment.(*Appendix 3*) The psychiatrist contacted the respondent via phone and letters of referral to the most convenient mental health facility were also provided to the guardians in order for them to make appointments to be seen (*Appendix 4*). If the respondent was found to have abnormal biomedical measures then they were referred to the nearest health centre. (*Appendix 5*)

Supervision and Quality Control Measures
The field supervisor monitored the daily activities of his/her field staff. The supervisor also conducted fortnightly checks with the team, which included field equipment checks. All problems were reported to the project coordinator on a weekly basis via the cellular telephone. Monthly meetings were held with the supervisors and in-house staff to discuss problems encountered. Completed questionnaires were collected by the field supervisors and checked for errors/omissions and then submitted to the Project Coordinator via courier service on a weekly basis.

Approximately 10 % of the respondents were re-interviewed and biomedical measures repeated by supervisors to provide quality checks on gathered data. Respondents selected for the quality checks were chosen at the coordinating centre in order to reduce selection bias. The results of the second interviews were compared with the original data and formed the basis of the Quality Report. The data quality was assessed using test-retest reliability coefficients (Appendix 6) and percent agreement (Appendix 7) between responses from the same individual obtained by supervisors and by interviewers. We also estimated intra-interviewer correlation coefficients (IICC) to quantify the degree to which differences between interviewers influence variation of sample means for biomedical measures. The intra-interviewer correlation coefficient is calculated as the proportion of total variation in interviewer measurements that is due to the differences between the interviewers. The between-interviewer variation that is considered here represents the summary statistical deviation of each interviewer mean from the overall gold-standard mean. The larger the between-interviewer variation, the larger the IICC will be. This in turn increases the interviewers' design effect which is a measure of how much interviewer variance affects the precision of the mean of biomedical measurements. Smaller values of IICC imply greater closeness between interviewer and supervisor measurements and therefore better data quality. The technical error of measurement (TEM) for the biomedical measure was also calculated to test the reliability of the measures throughout the course of the survey. (Appendix 7)

CHAPTER 3

DATA QUALITY

The quality of the data collected in the survey was assessed on two main criteria:

- Measurement errors
  - Data completeness
  - Instrument quality
  - Observer precision and accuracy
- Data processing errors

Data quality parameters

Table 3.1 lists some of the most commonly used parameters of data quality in survey research. A complete picture of measurement quality requires consideration of the completeness of measurements as well as the various sources of measurement error, including instruments, observers and subjects. The contribution to measurement error from observers and subjects cannot be easily separated out and therefore they are usually reported jointly as 'observer accuracy' and 'observer precision'.

Table 3.1 Parameters of Data Quality, Jamaica, 2006

Components of data quality	Frequently used parameters of data quality
Data completeness	Non-response rates
Instrument quality	Results of calibration checks Metronomic certification of instruments Results of validation of questionnaires
Observer precision	Technical error of measurement (TEM): intra-observer and inter-observer Reliability Coefficient Intra-Class Correlation Coefficient (ICCC) Kappa statistics: intra-observer and inter-observer
Observer accuracy	Bias in comparison with 'gold standard' Terminal digit preference Outlier deletion rates
Data processing quality	Residual error rates in a database-to-source document comparison

3.1 Measurement Errors

Data completeness

Table 3.2 shows the non-response rates of selected key variables in the survey. The table illustrates the low non-response rates for anthropometry (variable 1), blood level measurements (variables 2a and 2b), non-sensitive questions (variables 3 and 4) and sensitive questions (variables 5 and 6).

Table 3.2: Non-Response Rates of Selected Key Variables, Jamaica, 2006

Variable	Non-response rate (%)
1. Waist circumference	2.5
2. a. Cholesterol and 2.b.Glucose	7.8
3. Place of medical care	0.7
4. Highest level of education	0.3
5. Ever kissed/petted boy/man?	0.6
6. Ever kissed/petted girl/woman?	0.7

Instrument quality

In this survey, calibration checks were performed regularly on all anthropometric instruments and blood measurement equipment. Though no statistics are available on actual frequency of calibration checks and results of re-calibrations, no major problems were reported.

Observer precision

Measurement reliability at certification

Reliability of observers depends to a large extent on the level of training. Preparation for this survey included several weeks of instruction, piloting of questionnaire administration and intensive training on anthropometry. During anthropometry training, observers were required to achieve levels of measurement reliability comparable with the supervisors who trained them. At the end of the training period and shortly before the start of data collection in the field, a 'test-retest' exercise was completed during which each observer and their supervisor independently measured weight, height, blood pressure and waist and hip circumference of the same subjects on the same day. These duplicate measurements were done on a total of 65 subjects and were used to compute inter-observer reliability statistics (all observers combined) as shown in Table 3.3. The results indicate that observer precision at certification (start of data collection) was excellent, demonstrated through low Technical Errors of Measurement and high Reliability Coefficients.

Table 3.3: Inter-Observer Reliability at Start of Data Collection, Jamaica, 2006

Variable	Technical Error of Measurement	Reliability Coefficient
Weight	0.81 Kg	0.98
Height	0.29 cm	0.98
SBP	2.2 mmHg	0.98
DBP	1.7 mmHg	0.99
Waist circ.	0.73 cm	0.98
Hip circ.	0.73 cm	0.98

Reliability of collected data

During data collection observers took duplicate measurements on each subject. An intra-observer correlation coefficient (IOCC) was then calculated using the duplicates for several sub-periods of data collection. The IOCC expresses the amount of total variability in the measurements that is due to variability between means of the measurements by interviewers. Smaller values indicate better intra-observer reliability. Table 3.4 shows that for some variables, the IOCC increases as the amount of time since certification also increases.

Table 3.4: IOCC by Time since Certification, Jamaica, 2006

Variable	0 days	1-30 days	31-60 days	>60 days
Weight	0	0.25	0.49	0
Height	0	0.25	0.00	0.01
SBP	0	0.50	0.00	0
DBP	0	0.67	0.37	0
WC	0.06	0	0.58	0
HC	0	0	0.09	0.01

Quality checks by supervisors

Table 3.5 gives values for the test-retest reliability of the respective measurements and the way in which they changed over time. The two measurements for which the reliability coefficients were calculated, were obtained from the same study participant, but were provided by separate observers. The values suggest that the test-retest reliability of the measure remain high even as time between measurements increases. However, reliability of measurements of SBP, DBP, waist circumference and hip circumference were more noticeably lowered as time between measurements increased. The marked reduction in the reliability of the blood pressure measurements may indicate the natural variability in blood pressure measurements (within-person) taken on the same individual in addition to any variability introduced by the observers who took the measurements. This suggests that in attempting to assess test-retest reliability of anthropometry and bio-measurements, the time between measurements of these more sensitive or variable indices should be minimized.

Table 3.5: Reliability Coefficient Time between Duplicate Measurements, Jamaica, 2006

	Time between measurements			
Variable	0 days	1-30 days	31-60 days	>60 days
Weight	0.98	0.95	0.96	0.96
Height	0.98	0.97	0.94	0.97
SBP	0.98	0.40	0.49	0.34
DBP	0.99	0	0.15	0.41
Waist Circumference	0.98	0.98	0.86	0.81
Hip Circumference	0.98	0.94	0.90	0.78

Observer accuracy

Average bias in anthropometry

Certification data allow calculating an average bias of the observers in comparison with their supervisors. This was calculated as the mean of all 65 differences between observer values and supervisor values as obtained during the 'test-retest' exercise during certification. Average biases for weight, height, SBP, DBP, waist circumference and hip circumference were +0.023 Kg, +0.058 cm, -1.031 mm Hg, -0.015 mm Hg, +0.097 cm and -0.188 cm, respectively. This indicates the absence of any serious bias between observers and supervisors at the start of data collection.

Terminal digit preference

Inaccurate observers tend to have biased measurements due to inappropriate rounding of measurement values. This manifests itself in an unusually high frequency of values ending in .0 or .5 for measurements that require one decimal digit. Table 3.6 shows the expected and observed frequency of decimal digits, based on 981 height measurements taken during data collection. The results show that all observed frequencies are close to expected ones, indicating a high level of observer accuracy.

Table 3.6: Terminal Digit Preference of Height Measurements Taken During Survey, Jamaica, 2006

Terminal digit	Expected frequency (%)	Observed frequency (%)
.0	10.0	10.4
.1	10.0	11.1
.2	10.0	11.2
.3	10.0	8.1
.4	10.0	12.9
.5	10.0	11.9
.6	10.0	10.8
.7	10.0	9.1
.8	10.0	7.4
.9	10.0	7.0

Outliers

No statistics are available on outlier detection and deletion/correction rates. However these rates are expected to be very low because protected data entry was used, which included automated range and consistency checks. In addition, values in the database underwent further cleaning/outlier detection in preparation of reports and analyses.

Database-to-source document comparison

No statistics are available on residual error rates

3.2 Data Entry and Management

Completed questionnaires were rechecked in-house by both the project coordinator and the assistant project coordinator once submitted. The questionnaires were subsequently sent to the in-house data entry clerks for data entry. Following data entry, the questionnaires and dataset, were sent to the data coordinator for data cleaning to ensure accurate data input. The cleaned dataset was then sent to the biostatistician for analysis.

3.3 Representativeness of the Sample

Creation, application and implication of post-stratification weights

The Jamaican Youth Risk and Resiliency Behaviour survey provides data and information on risk and resiliency factors associated with healthy lifestyles among a nationally representative sample of youth ages 15-19 years in the population. The behaviours explored in the study include: violence, drug use, tobacco use, sexual activity, and mental health. The study also looked at chronic disease risk among youth including physical activity. In order to obtain national estimates of the factors of interest, sampling weights were calculated and applied to an estimation of the population parameters of interest (*Appendix 8)*. The sampling weights calculated were post-stratification weights to attempt to account for inadequacies of the sampling frame. The post-stratification adjustment cells were defined using the parish by sex distributions of Jamaican youth aged 15-19. These weights indicated the number of males and females represented by each male and female in the sample of 1,318 youth 15-19 year olds. The weights were obtained by dividing the number of persons in each parish by sex stratum in the entire island based on the 2001 census by number of persons in the sample within the corresponding parish by sex categories. When these weights are used in the estimation of the sex distribution of the age group studied, the values reflect those obtained using 2001 census data.

The results shown initially describe the age, sex and parish distribution of the study sample (Table 4.1, Table 4.2). Thereafter, the description of the data provides (weighted) national estimates for the factors considered.

3.4 Conclusions

Assurance of the collection of good data quality was achieved by training, certification and field supervision to ensure reliability and validity, as demonstrated by low technical errors of measurement and high reliability coefficients.

Data completeness was good as evidenced by low non-response proportions even to sensitive questions about intimate/sexual activity, where less than 1.0% of participants failed to provide an answer. Provision of biological samples for estimate blood glucose and cholesterol was high at greater than 90.0%. Resistance to providing finger-stick samples may be driven mainly by fear and a perception that the test is unnecessary.

Instrument quality was maintained throughout the survey by periodic calibration of instruments.

Observers showed excellent intra-observer reliability for biomedical measurements at the end of the training and certification period and this was maintained throughout the survey for hip circumference. Reliability remained acceptable throughout for the other measurements with the exception of diastolic blood pressure measurements.

There was no evidence of serious bias between observations made by observers and supervisors at the certification exercise. The absence of digit preference corresponds to the low levels of bias in making and reporting measurements.

Inter-observer reliabilities were excellent after certification and were maintained throughout the survey, with the exception of blood pressure measurement where the differences could be accounted for from natural within-participant variation and intervals between observations.

Accuracy of data entry was assured by two levels of verification prior to data analysis complemented by standard data cleaning exercises such as frequency checks and search for outliers.

Derivation of population estimates was enhanced by the use of post-stratification weights and accounting for the multi-stage cluster sampling design in the analyses.

3.5 Recommendations

- Training and certification of observers is mandatory in population surveys to assure data quality.
- Maintenance of high levels of reliability can be achieved by reducing the length of the data collection period which may require an increase in the number of observers for any given survey.
- Maintenance of data quality may be enhanced by recertification at between 30-60 days after initial training and certification.
- Intervals between test-retest measurements between observers and supervisors should be maintained at less than two weeks.

CHAPTER 4

BACKGROUND CHARACTERISTICS OF RESPONDENTS

4.1 Description of the Study Sample

The sample consists of 598 (45.4%) males and 719 (54.6%) females. Table 4.1 provides the age by sex distribution of the sample. The proportion decreases steadily for older age groups. Table 4.2 gives the parish distribution of study recruits within and across sex. St. Andrew and St. Catherine were parishes with the largest number of recruits while Portland, Trelawny and Hanover were parishes with the smallest number of recruits in keeping with the base population from which the sample was drawn.

Table 4.1: Distribution of Participants by Age and Sex, Jamaica, 2006

Age at last birthday (yrs)	Males	Females	Total
	% (*n*)	% (*n*)	% (*n*)
15	27.6(165)	30.0(215)	28.9(380)
16	24.3(145)	23.6 (170)	23.9 (315)
17	22.7 (136)	19.8 (142)	21.2 (278)
18	14.1 (84)	16.6 (120)	15.5 (204)
19	11.4 (68)	10.0 (72)	10.6 (140)
Total (N)	100 (598)	100 (719)	100 (1317)

Table 4.2: Distribution of Participants by Sex and Parish of Residence, Jamaica, 2006

Parish	Males	Females	Total
	% (*n*)	% (*n*)	% (*n*)
Kingston	4.7 (28)	4.5 (32)	4.6 (60)
St. Andrew	21.4 (128)	20.3 (146)	20.8 (274)
St. Thomas	4.5 (27)	4.7 (34)	4.6 (61)
Portland	2.2 (13)	2.4 (17)	2.3 (30)
St. Mary	4.7 (28)	4.5 (32)	4.6 (60)
St. Ann	6.5 (39)	7.1 (51)	6.8 (90)
Trelawny	2.5 (15)	2.1 (15)	2.3 (30)
St. James	7.0 (42)	6.3 (45)	6.6 (87)
Hanover	2.0 (12)	2.5 (18)	2.3 (30)
Westmoreland	6.0 (36)	7.5 (54)	6.8 (90)
St. Elizabeth	4.5 (27)	4.3 (31)	4.4 (58)
Manchester	7.5 (45)	6.3 (45)	6.8 (90)
Clarendon	8.0 (48)	10.0 (72)	9.1 (120)
St. Catherine	18.4 (110)	17.7 (127)	18.0 (237)
Total (N)	100 (598)	100 (719)	100 (1317)

Table 4.3 shows the parish distribution of study participants by year of age. The general trends between parishes persist and are consistent with the overall parish distribution as St. Andrew and St. Catherine carry the largest number and proportion of recruits at each age. For each parish, the 19 year-olds have the lowest representation in the sample.

Table 4.3: Distribution of Participants by Age and Parish of Residence, Jamaica, 2006

	Age at last birthday (years)					
Parish	**15**	**16**	**17**	**18**	**19**	**Total**
	% (*n*)	% (*n*)	% (*n*)	% (*n*)	% (*n*)	% (*n*)
Kingston	4.7(18)	5.7(18)	4.7(13)	3.4(7)	2.9(4)	4.6(60)
St. Andrew	19.0(72)	23.2(73)	18.0(50)	21.1(43)	25.7(36)	20.8(274)
St. Thomas	5.5(21)	4.4(14)	5.8(16)	3.9(8)	1.4(2)	4.6(61)
Portland	2.4(9)	1.6(5)	2.9(8)	2.0(4)	2.9(4)	2.3(30)
St. Mary	3.7(14)	4.8 (15)	4.3 (12)	6.4(13)	4.3(6)	4.6(60)
St. Ann	7.9(30)	7.6(24)	7.2(20)	5.4(11)	3.6(5)	6.8(90)
Trelawny	1.8 (7)	1.6 (5)	3.6 (10)	2.0 (4)	2.9 (4)	2.3 (30)
St. James	8.1(31)	7.3(23)	4.7(13)	7.4(15)	3.6(5)	6.6(87)
Hanover	4.2(16)	1.3(4)	1.4(4)	2.0(4)	1.4(2)	2.2(30)
Westmoreland	6.3(24)	8.9 (28)	5.4(15)	7.4(15)	5.7(8)	6.8(90)
St. Elizabeth	2.9(11)	2.9(9)	7.2(20)	4.4(9)	6.4(9)	4.4(58)
Manchester	5.3(20)	8.3(26)	6.8(19)	8.3(17)	5.7(8)	6.8(90)
Clarendon	9.7(37)	5.7(18)	9.7(27)	9.8(20)	12.9(18)	9.1(120)
St. Catherine	18.4(70)	16.8(53)	18.4(51)	16.7(34)	20.7(29)	18.0(237)
Total	100.0	100.0	100.0	100.0	100.0	100.0
N	381	315	279	204	140	1317

As the major objective of this study is to estimate the population parameters of interest subsequent analyses will provide population (weighted) estimates rather than sample (unweighted) estimates. These will be derived using the weights described in Chapter 3.

The weighted distribution of the Jamaican youth by year of age and sex (Table 4.4) is very similar to the distribution in the sample (Table 4.1)

Table 4.4: Population Distribution (%) of Jamaican Youth 15-19 Years Old by Age and Sex, Jamaica, 2006

Demographic index	**Males**	**Females**	**Total**
Age (years)			
15	27.5	29.9	28.7
16	23.7	23.3	23.5
17	22.9	19.9	21.4
18	14.3	16.6	15.5
19	11.6	10.2	10.9

As shown in Table 4.5, a larger proportion of participants were urban dwellers, which is consistent with national statistics showing an overall 52:48 urban: rural ratio in the 2001 census. The urban: rural ratio of 55:45 shown in this study may be attributable to sampling error or reflect a trend of increasing urbanization. National statistics show that the urban: rural ratio changed from 48:52 in 1982 to 50:50 in 1991 and 52:48 in the most recent 2001 census. This is in keeping with the larger parishes of St. Andrew and St. Catherine being home to large urban centres.

Table 4.5: Percent Distribution of Participants by Urban-Rural Residence and Age, Jamaica, 2006

Age at last birthday (yrs)	Males		Females		Totals	
	Urban	Rural	Urban	Rural	Urban	Rural
15	55.8	44.2	49.1	50.9	52.5	47.5
16	54.7	45.3	55.1	44.9	54.9	45.1
17	56.7	43.4	55.6	44.4	56.1	43.9
18	58.2	41.8	56.7	43.3	57.4	42.6
19	55.9	44.1	55.7	44.3	55.8	44.2
Totals	56.3	43.7	54.4	45.6	55.4	44.6

4.2 Home Environment

Just over a quarter of youth live with both biological parents and this was more frequent among males than females (31.1 vs. 24.5%; $p<0.01$). Fifty per cent of youth live with one biological parent and where this is so, residence with mother is significantly more frequent (41.3 vs. 9.0%; $p<0.02$). At the same time over 20% of youth did not live with a biological parent and this did not differ by sex (Table 4.6).

Table 4.6: Distribution (%) of Jamaican Youth Who Live With Given Relatives, Jamaica, 2006

Relative	Males	Females	Total
Both Biological parents**	31.1	24.5	27.9
One Biological Parent	48.1	52.6	50.3
-mother	37.6	45.1	41.3
-father	10.5	7.5	9.0
Other relative	18.7	19.7	19.2
Non-relative	2.1	3.1	2.6

**p<0.01 males vs. females

Just fewer than 10.0% of Jamaican youth ages 15-19 years old reported that their parents were in visiting relationships, which was consistent in both sexes. On the other hand, about 60.0% of Jamaican adolescents report that their parents have no relationship, and girls report a higher proportion (63.5%) than boys (56.8%) but this difference is not statistically significant at the 95% level. More boys report marriage or a common-law relationship between their parents (34.0%) compared to 26.6% reported by girls (Table 4.7).

Table 4.7: Distributions (%) of The Status of Relationships between The Parents of Jamaican Youth, by Sex (95% Confidence Intervals), Jamaica, 2006

Status of parents' relationship	Males	Females	Total
No relationship	56.8 (53.1-60.4)	63.5 (60.0-67.0)	60.1 (57.5-62.8)
Visiting	9.3 (6.0-12.6)	9.9 (7.6-12.1)	9.6 (7.4-11.8)
Common-law	13.3 (10.1-16.5)	9.1 (7.0-11.3)	11.2 (9.1-13.3)
Married	20.7 (17.4-24.0)	17.5 (14.2-20.8)	19.1 (16.5-21.7)

The majority of Jamaican adolescents (61.2%) report that their parents live separately, a proportion larger among females compared to males (65.0% vs. 57.4%) but not statistically significant (Table 4.8). In contrast, fewer than 30.0% of youth, 33.3% of males and 26.4% of females (P<0.05), had parents living together. The causes and implications of these sex differences are not immediately obvious although living with both parents is associated with reduced likelihood of ever having sex (Odds Ratio [OR] =0.67, 95% CI =0.51-0.88) and the presence of depressive symptoms (OR= 0.46, 95% CI =0.28-0.75). One third of adolescents reported that their parents live together, and of these, only 60.8% are legal marriages.

Table 4.8: Age-Specific Distributions – Expressed As Percentages (%) – of The Status of Parents of Jamaican Youth, by Sex, Jamaica, 2006

Status of parents	15 years	16 years	17 years	18 years	19 years	Total
Both Sexes						
One/both dead	7.2	6.9	8.6	11.6	12.3	8.7 (7.2-10.1)
Not Known	-	0.3	0.7	0.4	-	0.3 (0.01-0.6)
Living separately	61.8	60.4	60.0	63.8	59.8	61.2 (58.2-64.2)
Living together	31.0	32.4	30.7	24.2	27.9	29.9 (27.2-32.5)
Males						
One/both dead	8.0	5.7	10.2	8.4	15.5	8.9 (6.7-11.0)
Not Known	-	-	1.4	0.9	-	0.4 (0.0-0.9)
Living separately	55.2	62.0	50.8	62.4	59.7	57.4 (53.5-61.2)
Living together	36.7	32.4	37.6	28.3	24.8	33.3 (29.7-36.9)
Females						
One/both dead	6.4	8.2	6.7	14.3	8.7	8.5 (6.3-10.6)
Not Known	-	0.6	-	-	-	0.2 (0.0-0.4)
Living separately	67.8	58.8	70.7	65.0	59.8	65.0 (61.1-68.9)
Living together	25.7	32.4	22.6	20.7	31.5	26.4 (23.0-28.9)

Table 4.9 presents the distribution of several key demographic indices for 15-19 year-olds in Jamaica. Approximately 2.5% have had either no or only primary education, with no significant difference between the sexes. This translates to just over 5,000 youth and has implications for the future position and upward mobility of this group in the population. The vast majority of youth had received secondary education by ages 15-19 years (91.2%) and 6.3% had obtained tertiary education by this age (Figure 4.1). Based on this data, it is estimated that approximately 8% of the 15-19 year-old age group are in some form of full-or part-time employment, with twice the proportion of males compared to females (10.7 vs. 5.8%; $p < 0.05$).

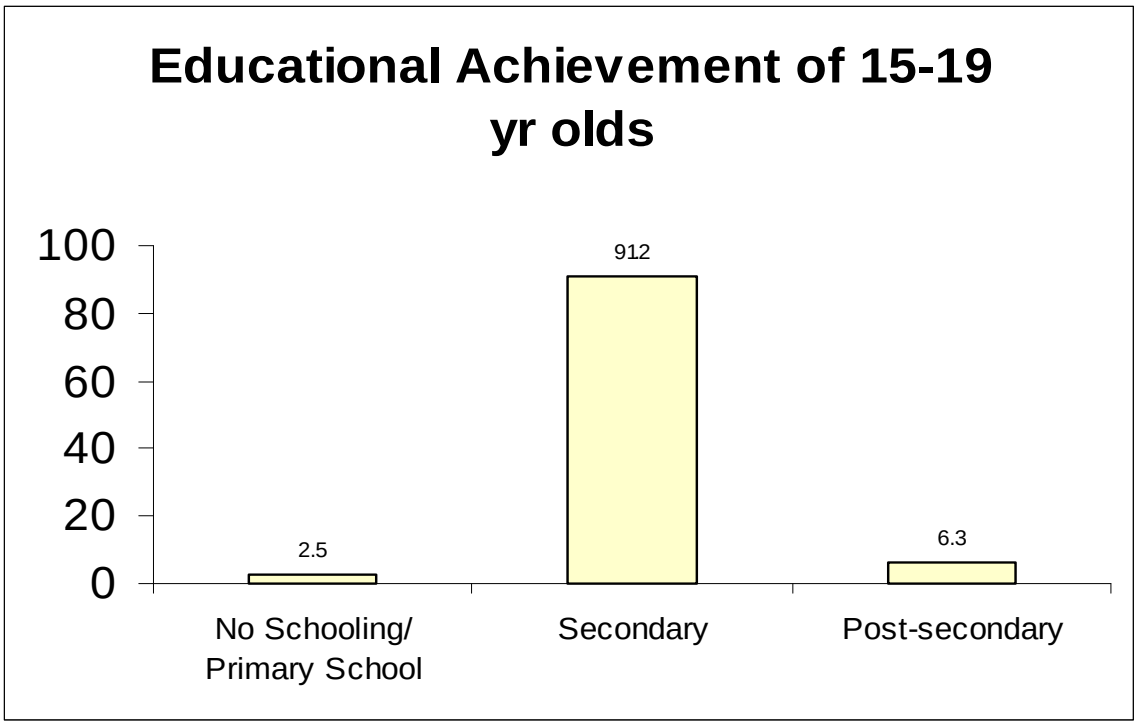
Eighty-five per cent of youth report a religious affiliation, with the vast majority being Christian. Of those who report no religious affiliation, males are twice as frequent as females (20.6 vs. 10.0%; $p< 0.0001$). Significantly more females attend church often. (47.7 vs. 35.0%)
The study estimated that 7.7% of youth are in a marital or quasi-marital union with males reporting twice the frequency of females (10.0 vs. 5.3%; $p<0.01$) (Table 4.9).

Table 4.9: Distribution (%) of Demographic Indices for 15-19 Year-Olds by Sex, Jamaica, 2006

Demographic index	Males	Females	Total
Educational achievement			
No schooling/Primary	2.8	2.2	2.5
Secondary	91.3	91.1	91.2
Post-secondary	5.9	6.7	6.3
Employed	10.7	5.8	8.3
Religious affiliation			
Christian	75.9	87.9	82.0
Other Religion	3.6	2.1	2.8
No Religion	20.6	10.0	15.2
Church Attendance			
Never	17.3	10.4	13.7
Occasionally	47.6	41.9	44.6
Often	35.0	47.7	41.8
Union status[1]			
In A Union	7.7	5.3	10.0
Other	92.4	94.6	89.7
Parents' union Status			
Living together	33.5	26.5	30.0
Living separately	57.6	65.1	61.4
One dead	8.0	8.0	8.0
Both dead	0.9	0.5	0.7
Parents' marital status[2]			
Married	60.8	65.4	62.8
Common-law	39.2	34.6	37.2
N	598	719	1317

[1]In union included persons who were in visiting relationship, common law and married
[2]If living together

Figure 4.1: Educational Attainment of Jamaican 15-19 year olds, Jamaica, 2006



4.3 Employment

Further exploration of the frequency of engagement in employment by Jamaican youth revealed that employment proportions are low (2.0%) among 15 and 16 year olds. This increases to 9.0% among 17 years old and to 17.6% and 21.6% among 18 and 19 year olds respectively (Table 4.10). Among those reporting employment, the majority (59.0%) are engaged full-time, 31.0% part-time and 10.0% seasonally.

Table 4.10: Percentages (%) [95% CIs] of The 15-19 Year-Olds, Employed; by Age and Sex, Jamaica, 2006

Age (years)	Males	Females	Total
15	3.8 (0.9-6.7)	1.5 (0.0-3.7)	2.6 (0.6-4.6)
16	4.3 (1.0-7.6)	0.4 (0.0-1.3)	2.4(0.6-4.1)
17	12.0 (5.7-18.3)	5.4 (1.4-9.3)	8.9(5.0-12.8)
18	22.9 (13.5-32.4)	12.9 (7.3-18.4)	17.6(11.3-23.8)
19	23.2 (13.4-33.0)	19.8 (10.2-29.4)	21.6(14.1-29.2)
Total	10.7(8.0-13.5)	5.8 (4.1-7.4)	8.3 (6.7-9.9)

Approximately 46.0% of the population have running water inside their houses and 80% of the total sample has access to running water. Over 72.0% of youth have a water closet for sewage disposal, but 13% of this age group share water closet facilities with other households (Table 4.11). Data on nineteen (19) household possessions were collected in an effort to assess socio-economic status (SES). The maximum number of items owned by any household was 18. As three items (gas/electric stove, refrigerator, and television) were present in 90.0% or more of households, they were considered to have limited discriminating value and were consequently

excluded from the analysis resulting in 16 items being used to assess SES. The possessions considered being of discriminating value included a sewing machine; microwave oven, air-conditioning, telephone, stereo equipment, washing machine, motor vehicle and computer equipment. Sixty-five per cent (65.0 %) of respondents have 6 or more of these items in their homes.

The impact of the presence of these household possessions (a marker of socio-economic status) on youth behaviour and experience with abuse was explored and a greater number of possessions appeared to be protective against sexual activity and being a victim of abuse. Compared to youth from households with five or fewer possessions, youth from households with 6-8 and 9-15 of the items were less likely to have ever had sex ([OR] 0.97 [0.74, 1.27]; 0.63 [0.46. 0.87] respectively) and less likely to be victims of abuse (OR 0.8 [0.6, 1.1; 0.4 [0.3, 0.7]). The crowding index (number of persons per habitable room in the household) was 1.4 with females reporting a slightly higher index than males, 1.5 and 1.3 respectively, but this difference was not statistically significant (Table 4.11).

Table 4.11: Distribution [1](%) of Social Amenities Available to The 15-19 Year-Olds within and Across Sex, Jamaica, 2006

Social Amenity	Males	Females	Total
Water Source			
River/Spring	2.4	1.6	2.0
Tank/Drum	13.9	16.2	15.1
Standpipe	8.7	9.3	9.0
Pipe Outside house	19.5	22.2	20.8
Piped into house	53.4	49.2	51.3
Bottled Water	2.2	1.4	1.8
Toilet facility			
None	0.2	0.4	0.3
Hole in the earth	0.8	0.6	0.7
Shared Pit latrine[i]	7.2	6.6	6.9
Unshared pit latrine	18.0	21.2	19.5
Shared water closet[2]	12.0	13.3	12.7
Unshared water closet	61.7	58.0	59.8
6-15 household items[3]	67.4	63.3	65.4
Crowding Index (mean [95% CI])	1.3 (1.20 -1.40)	1.5(1.38 - 1.61)	1.4 (1.31– 1.49)

[1] Percentages are given for the respective amenities excepting crowding index for which means and confidence intervals are given.
[2] Shared with other households
[3]These are items which should improve the respondent's quality of life and exclude the more commonly found items such as television set, stove and refrigerator

4.4: Rural-Urban Differentials

The distribution of informative demographic variables by area of residence was also examined, as urbanization is often associated with many lifestyle changes with implications for disease risk (Table 4.12).

School achievement did not appear to vary by urban/rural residence. A higher proportion of rural youth were in employment compared to their urban counterparts, and this was consistent for both sexes; however none of these differentials were statistically significant. There were also no statistically significant differences between urban and rural dwellers with regard to religious affiliation and church attendance. Rural youth reported being in a union more frequently than their urban counterparts and while this was not statistically significant overall, the difference among males (8.5% vs. 3.0%) was significant ($p < 0.01$). A higher proportion of urban youth live in homes which have six or more of the possessions that were used to assess SES (70.5% vs. 58.8%; $p < 0.01$). This difference persisted for both sexes but was only significant among females (70.3%vs.55.5%; $p< 0.01$).

Table 4.12: Distribution (%) of Demographic Indices by Sex and Urban/Rural Residence, Jamaica, 2006

Demographic Indices	Males		Females		Total	
	Urban	Rural	Urban	Rural	Urban	Rural
Education						
No school/Primary	2.4	3.3	2.6	1.7	2.5	2.5
Secondary	91.4	91.2	91.1	91.2	91.2	91.2
Post-secondary	6.2	5.6	6.3	7.1	6.3	6.4
Employment status						
Unemployed	90.8	87.1	94.6	93.9	92.6	90.7
Employed	9.2	12.9	5.4	6.1	7.4	9.3
Religious affiliation						
Christian	76.4	75.2	84.1	92.1	80.3	84.2
-Other Religion	4.7	2.1	2.2	2.0	2.0	3.5
- No Religion	18.9	22.6	13.7	6.0	16.3	13.7
Church attendance						
Never	19.9	13.7	13.7	6.9	16.8	9.7
- Occasionally	43.3	53.7	41.8	42.5	42.6	47.2
- Often	36.7	32.7	44.5	50.6	40.7	43.1
Union status[1]						
In union	3.0**	8.5	7.8	12.5	5.	10.6
Other	97.0	91.5	92.2	87.6	94.6	89.4
Parental Union status						
Living together	34.4	31.6	23.9	19.1	29.2	30.3
Living separately	56.6	59.7	67.0	63.2	61.7	61.5
One or both dead	9.0	8.8	9.1	7.7	9.1	8.2
Parental marital status[2]						
Married	20.1	21.1	16.6	18.6	18.2	19.8
Common-law	14.7	11.3	7.8	10.6	11.3	10.9
Socioeconomic status**						
≤5 items	29.7	44.5	29.3	37.5	29.5	41.2
≥ 6 items	70.3	55.5	70.7	62.5	70.5	58.8

** $p < 0.01$

[1]In union included persons who were in visiting relationship, common law and married [2]If living together

Water sources and toilet facilities primarily used by Jamaican teenagers were further classified into groups defined in Table 4.13. At least 70.0% of 15-19 year-olds has access to indoor toilet facilities and at least 50.0% have water piped into their houses. Information on respondent's use of extra funds were classified into one of three groups – save, spend on self, spend otherwise. Within and across sex, more than 50.0% indicated that they would save any extra money they had. Among females, there is a reduced propensity to save with increasing age.

Table 4.13: Age-Specific Distributions – Expressed as Percentages (%) – of Socioeconomic Indices among Jamaican Youth, within and Across Sex, Jamaica, 2006

	15 years	16 years	17 years	18 years	19 years
TOTAL					
Indoor toilet facilities					
No	30.2	26.6	26.4	28.1	22.4
Yes	69.8	73.4	73.6	71.9	77.6
Water source					
Open	17.4	17.3	20.1	15.7	11.6
Piped to outside house	32.5	29.2	26.3	29.1	31.0
Piped into house	50.0	53.5	53.6	55.1	57.4
Extra Funds					
Save	60.9	56.9	56.1	53.0	55.9
Spend on self	26.6	22.4	22.5	26.9	23.6
Spend otherwise	12.6	20.6	21.3	20.1	20.5
MALES					
Indoor toilet facilities					
No	26.1	25.0	29.8	26.6	19.7
Yes	73.9	75.0	70.2	73.4	80.3
Water source					
Open	18.8	14.2	17.9	15.8	10.9
Piped to outside house	26.4	30.3	29.9	26.2	24.9
Piped into house	54.7	55.4	52.2	58.0	64.2
Extra Funds					
Save	60.3	51.0	53.8	48.5	58.7
Spend on self	30.6	27.6	24.0	26.9	25.1
Spend otherwise	9.1	21.4	22.2	24.6	16.2
FEMALES					
Indoor toilet facilities					
No	34.0	28.2	22.4	29.3	25.8
Yes	66.0	71.8	77.6	70.7	74.2
Water source					
Open	16.1	20.4	22.6	15.7	12.5
Piped to outside house	38.2	28.1	22.1	31.6	38.0
Piped into house	45.7	51.5	55.2	52.7	49.5
Extra Funds					
Save	61.4	63.0	59.0	57.0	52.8
Spend on self	22.7	17.1	20.7	27.0	22.0
Spend otherwise	15.9	20.0	20.3	16.0	25.2

4.4 Conclusion

The age-sex weighted distribution of the sample was very similar to the population distribution. The proportion of recruited participants was also proportionate to parish size. The urban-rural ratio of population distribution is greater than in the last census in 2001 and may reflect the continuing trend to urbanization of the Jamaican population.

A minority of Jamaican youth lived with both parents but the largest proportion of youth lived with a single parent who in the majority of cases was the mother. This is also consistent with the Survey of Living Conditions which indicates that 47.0% of Jamaican households were headed by females. A fifth of Jamaican youth lived in homes where neither parent was present (31). Sixty per cent of youth reported that their parents were not currently in a relationship at the time of the survey and this was also consistent across all age groups.

Sixty five per cent of the 15-19 year old youth were currently attending school and 10 percent were employed, with the labour force participation rates being significantly greater for boys than girls. Employment was more prevalent in the older age groups and most employed youth reported full-time employment. A larger proportion of rural youth reported being currently employed compared to their urban counterparts and a small minority of youth who were less than 16 years old report being employed. Up to 10.0% of youth were union.

An examination of the household social amenities enjoyed by youth revealed that though the vast majority had access to running water and water closets for sewage disposal, up to 30.0% of youth were in households that used pit latrines. Generally respondents lived in crowded conditions with an average of more than one person per habitable room. Rural youth had fewer household possessions than urban youth.

Adolescents who lived with both biological parents appeared to be protected from depressive symptoms and had a reduced likelihood of ever having sexual intercourse, while increased household possessions were associated with decreased likelihood of sexual activity or being abused.

4.5 Recommendations

Augmented efforts to improve the social circumstances of youth should be prioritized in order to generate a long-term positive impact on youth health and well-being. In particular, parental presence should be increased and basic household possessions should be present in order to enhance the quality of life of these adolescents.

CHAPTER 5

EDUCATION

5.1 Education & Connectedness to School

Sixty-five percent (65.0%) of adolescents aged 15-19 were currently in school while 2.5% reported having either no schooling or only primary school education. Table 5.1 gives the percent distribution of the educational attainment of 15-19 year-olds by age, sex and level of education attained. The vast majority of young people in this age group have been exposed to secondary education or higher with 6.3% having achieved post-secondary level education. Less than one percent of adolescents in the younger ages (15-16 year old) had no schooling compared to1.9-4.5% of the older youth (17-19 year old). These differences were not statistically significant but suggest a cohort effect i.e. failure to attend school may be a disappearing phenomenon. Although 18 and 19 year-olds had the highest frequency of no schooling, all who reported attending school were exposed to secondary or post-secondary education. These older youth, as expected, had the highest level of exposure to post-secondary education (15.4% and 24.8% respectively). Post-secondary education was rare among 15-16 year olds.

Table 5.1: Percent Distribution of 15-19 Year Olds by Age, Sex and Educational Attainment, Jamaica, 2006

Age (years)	No Schooling	Primary	Secondary	Post-secondary	Total	N
Both Sexes						
15	0.4	1.0	98.6	0.0	100.0	368
16	0.6	0.7	98.2	0.5	100.0	256
17	1.9	2.7	90.2	5.2	100.0	139
18	2.0	0.0	82.6	15.4	100.0	58
19	4.5	0.0	79.7	24.8	100.0	39
Total	1.5	1.0	91.2	6.3	100.0	860
Females						
15	0.0	0.9	99.1	0.0	100.0	207
16	1.3	0.7	97.0	1.0	100.0	137
17	3.4	0.0	90.5	6.1	100.0	72
18	2.5	0.0	83.3	14.3	100.0	30
19	3.9	0.0	67.5	28.5	100.0	23
Total	1.8	0.4	91.1	6.7	100.0	469
Males						
15	0.7	1.2	98.1	0.0	100.0	161
16	0.0	0.7	99.3	0.0	100.0	119
17	0.7	5.1	89.9	4.3	100.0	67
18	1.4	0.0	81.9	16.7	100.0	28
19	4.9	0.0	73.6	21.5	100.0	16
Total	1.1	1.7	91.3	5.9	100.0	391

Table 5.2 gives the distribution of educational attainment for the 15-19 year-old males and females in Jamaica. There appears to be no sex difference in educational attainment as measured by proportions at each grade level among Jamaican youth.

Table 5.2: Distribution (%) of Educational Attainment within and Across Sex, Jamaica, 2006

Level of Education	Males	Females	Total
No Schooling	1.0	1.8	1.5
Grade 3	0.2	0.0	0.1
Grade 4	0.3	0.2	0.2
Grade 5	0.5	0.0	0.2
Grade 6	0.5	0.3	0.4
Grade 7	0.3	0.1	0.2
Grade 8	3.0	3.3	3.2
Grade 9	25.1	24.9	25.0
Grade 10	25.4	27.3	26.5
Grade 11	34.7	32.9	33.7
Grade 12/13	3.2	2.5	2.8
Technical/Vocational	2.7	2.2	2.4
College/University	3.0	4.5	3.8
Totals	100.0	100.0	100.0
N	594	718	1312

The age grade deficit was calculated based on the assumption that at a specific age an adolescent should have attained a certain grade level of education (Table 5.3). According to the Ministry of Education Grade Achievement Scheme, a 15–year-old should have achieved at least a 9th grade level of education i.e., should be in grade 10 (31). The analysis of the age-grade deficit was restricted to the 65% percent of adolescents who were currently in school and was based on the assumption that a 15-year-old would be in Grade 10, with the older ages increasing at one year increments in grade level. Based on this premise 28.0% of children are at or ahead of their grade level while 47.2% were a year behind their expected grade. Over 28.0% of children were two or more years behind their expected level and just over 1.0% (approximately 2500 nationally in the age group) were five or more years below the expected level. More males (28.6%) were delayed by 2 years or more behind their grade level than females (21.0%) and the largest difference was with respect to a delay of 2 years, with 22.6% of males delayed compared to 13.7% of females.

Table 5.3 Distribution (%) of Age Grade Deficit of Jamaican 15-19 Years Old Adolescents, Jamaica, 2006

Period of Delay	Male	Female	Total	N
No delay	26.3	29.6	28.0	234
1 years	45.1	49.5	47.2	454
2 years	22.6	13.7	18.2	132
3-5 years	5.0	5.8	5.4	32
> 5 years	1.0	1.5	1.2	7
Total	100	100	100	859

Table 5.4 shows that a 1-year deficit was most marked among 15-year-olds (approximately 60%), while the 2-year delay was most prevalent among 18-year-olds (46.0%); sex differences were marked in the latter age group (54.4% males and 31.2% females). Age-grade deficit of 3 or more years was more frequent among 18-19 year olds (12.0% - 28.9%) compared to the younger ages (0.3% - 5.7%) and extreme deficit of 5 years or more was more frequent in the 19 year olds at 6.3% compared to 1% or less in the younger age groups. This association was statistically significant ($P< 0.001$) within and across sex i.e. among males, females and both sexes. This deficit in the older age groups possibly represents a cohort effect indicative of the changes in Jamaica's educational system which currently permits fewer opportunities for repeating grades in school or a delayed start at the primary or secondary level.

Table 5.4: Age- Grade Deficit of 15-19 Years Old Jamaican Adolescents by Years of Delay and Age, Jamaica, 2006

	Ages						
Period of Delay	**15 Years**	**16 Years**	**17 Years**	**18 Years**	**19 Years**	**Total**	**N**
No delay							
Males	27.5	24.5	14.7	20.8	71.1	26.3	99
Females	31.5	22.7	15.3	36.3	62.5	29.6	135
Total	29.5	23.6	15	26.4	65.9	28.0	234
1 year							
Males	60.3	53.7	43.1	12.9	0.0	45.1	199
Females	62.1	59.5	54.9	12.2	0.0	49.5	255
Total	61.2	56.6	49.2	12.6	0.0	47.2	454
2 years							
Males	9.3	19.6	36.9	54.4	0.0	22.6	73
Females	5.6	14.9	24.1	31.2	4.6	13.7	59
Total	7.4	17.3	30.3	46	2.8	18.2	132
3-5 years							
Males	1.3	1.4	3.9	12	28.9	5.0	5
Females	0.3	2	5.7	20.3	22.6	5.8	17
Total	0.8	1.7	4.8	15	25.1	5.4	32
> 5 years							
Males	1.6	0.8	1.5	0.0	0.0	1.0	4
Females	0.5	0.8	0.0	0.0	10.2	1.5	3
Total	1.0	0.8	0.8	0.0	6.3	1.2	7

As shown in Table 5.5 almost all respondents reported they liked school, with no sex differentiation, but only 60.0% reported involvement in extra curricular activities, with similar male/female proportions. Approximately 15.0% of the population currently in-school reported having problems with reading, with a significantly larger proportion of males reporting reading problems compared to females (19.5% vs. 10.1%). The estimated proportions of youth in school that required special classes for learning and behavioural problems were 7.8% and 5.4% respectively with no significant sex differences, although the proportion among females was nominally less than among males. Problems with homework were reported by approximately 42% of youth with about 3% reporting that they always had problems. A greater percentage of males reported problems with homework either sometimes or always (45.3% vs. 38.4% for females) (Table 5.5). There were no sex differences in the frequency with which parents checked the children's homework but only 37.0% reported that parents checked their homework always or most times.

Table 5.5: Percentages (%, with 95% CIs in Brackets) of The 15-19 Year-Olds, Exhibiting Different Forms of School Connectedness within and across Sex, Jamaica, 2006

School Connectedness	Males	Females	Total
Reported liking School	97.2(95.6-98.8)	99.5(98.8-100)	98.3(97.5-99.2)
Involved in extracurricular activities	57.9(51.9-63.9)	60.1 (54.4-65.9)	59.0(54.8-63.2)
Trouble with Reading	19.5 (15.4-23.7)	10.1 (7.0-13.2)	14.9(12.017.7)
Special class for learning problems	9.5 (6.9-12.1)	6.1 (3.6-8.7)	7.8 (6.2 – 9.6)
Special class for behaviour problems	6.3 (3.7-9.0)	4.4 (2.5-6.4)	5.4 (3.7-7.1)
Trouble with homework			
Always	3.7 (1.7-5.7)	2.0 (0.6-3.4)	2.9 (1.6-4.2)
Sometimes	41.6 (35.9- 47.3)	36.4 (31.6-41.3)	39.0(25.5-42.6)
Never	54.7 (49.0-60.5)	61.6 (56.5-66.6)	58.1(54.4-61.8)
Parent checks homework			
Never/Rarely	29.4(20.0-34.8)	28.5(22.3-36.1)	27.5(23.2-33.4)
Sometimes	31.9(28.5-38.3)	32.6(27.2-36.7)	33.3 (29.0-36.4)
Most times/Always	37.1(28.3-45.7)	37(27.1-47.3)	36.8 (29.7-44.3)
Not applicable- no contact with parents	1.6(-0.2-5.1)	2(0.3-2.7)	2.4 (0.2-3.8)
Totals	100.0	100.0	100.0
N	391	469	860

Significantly fewer females reported reading difficulties than males (Table 5.6) but while the point estimates at each age showed higher proportions of males with reading difficulties, the difference

is only significant among 16 year olds. Nineteen year olds appear to have the highest proportion reporting difficulty with reading, which is counterintuitive as there is the expected tendency for reading difficulties to be less frequent as age increases. However, this finding is consistent with the finding that 19 year olds have the highest frequency of not having any schooling and further supports the postulated cohort effect. The wide confidence intervals around some of the age-specific estimates reflect the conservative estimates and large standard errors derived from the study design, including weighting, along with the small sample sizes in these subgroups. Those confidence intervals which include negative values at the lower end suggest that 0% is a possible value for the respective estimates.

Table 5.6: Age Specific Percentages (%) of Adolescents, within and across Sex, Who Have Trouble with Reading (with 95% CIs in Brackets), Jamaica, 2006

Age (years)	Males	Females	Total
15	21.9(15.2-28.7)	13.2(8.4-18.1)	17.4 (13.4-21.4)
16	20.9(13.6-28.3)	5.7(1.7-9.7)	13.6 (9.2-17.9)
17	12.5(4.4-20.7)	10.0(2.5-17.4)	11.3 (5.4-17.2)
18	13.0 (-1.5- 27.5)	6.1(-5.0 – 17.2)	10.2 (0.6-19.7)
19	24.5(-18.2-67.2)	15.6(-13.8 – 45.0)	20.1 (-6.2 – 46.4)
Total	19.5(15.4-23.7)	10.1(7.0-13.2)	14.9(12.0-17.7)

Unlike reading difficulties, learning problems show no significant sex differences although the point estimate is higher for males (Table 5.7). There are no significant age-specific differences and the point estimates do not show a consistent direction as learning difficulties appear more frequent among males ages 15 to 17 years while being more frequent in 18 and 19 year old females.

Table 5.7: Age Specific Percentages (%) of Youth, within and across Sex, Who Have Been in a Special Class for Persons with Learning Problems (with 95% CIs in Brackets), Jamaica, 2006

Age (years)	Males	Females	Total
15	11.2(6.3-16.1)	8.5(4.5-12.5)	9.8(6.9-12.7)
16	7.8(2.9-12.7)	3.5(0.6-6.4)	5.7(2.9-8.6)
17	10.4(0.8-20.1)	3.0(-1.2-7.1)	6.9(1.3-12.5)
18	4.7(-4.7-14.1)	6.1(-4.9 – 17.2)	5.3(-2.0-12.6)
19	0.0	22.7(-16.5-62.1)	11.2(-9.8-32.4)
Total	9.5 (6.9-12.1)	6.1(3.6-8.7)	7.8(6.2 – 9.6)

Table 5.8 shows the proportions of youth who have been in special classes for persons with behavioural problems. In both sexes and all age categories these proportions are less than the proportions reporting learning problems as shown in Table 5.5, suggesting that the needs of this group are underserved. No significant sex differences are seen in these estimates and there are no consistent age-related trends.

Table 5.8: Percentages (%) [with 95% CIs] of Youth, Who Have Been in a Special Class for Persons with Behaviour Problems by Age and Sex, Jamaica, 2006

Age (years)	Males	Females	Total
15	6.2(2.4-10.1)	4.3(1.5-7.0)	5.2(2.6-7.8)
16	6.9(2.4-11.3)	6.1(1.9-10.4)	6.6(3.8-9.2)
17	3.1(-0.9-7.2)	3.1(-1.2 -7.3)	3.1(0.1 – 6.0)
18	15.2(-1.3 – 31.8)	0.0	9.3 (-1.1-19.7)
19	0.0	0.0	0.0
Total	6.3(3.7-9.0)	4.4(2.5-6.4)	5.4(3.7-7.1)

Over 40.0% of respondents reported having problems with their homework 'always' or 'sometimes'. Despite a greater frequency among males (45.3%) compared to females (38.4%) regarding this indicator, these differences were not statistically significant (Table 5.9). In addition, while there were no consistent trends across age categories, the large proportion of 19 year olds who reported homework difficulties was consistent with lower levels of education in this older group, as reflected by other indicators including absence of schooling and reading difficulties.

Table 5.9: Percentages (%) of Jamaican 15-19 Year-Olds up to Grade 13 Who Report Varying Levels of Difficulties with Home Work, by Age and Sex, Jamaica, 2006

Age (years)	Always	Sometimes	Never
Both Sexes			
15	2.7	40.1	57.2
16	1.2	42.8	56.0
17	5.0	33.9	61.1
18	5.5	25.5	69.0
19	1.8	22.7	59.6
Total	2.9(1.6 – 4.2)	39.0(35.5-42.6)	58.1(54.4-61.8)
Females			
15	2.4	36.7	60.8
16	1.5	40.9	57.6
17	0.0	27.2	72.8
18	0.0	31.5	68.5
19	3.6	45.9	18.3
Total	2.0(0.6-3.4)	36.4(31.6-41.3)	61.6(56.5-66.6)
Males			
15	2.9	43.7	53.4
16	1.0	44.5	54.6
17	9.5	39.9	50.6
18	9.2	21.4	69.4
19	0.0	0.0	100.0
Total	3.7(1.7-5.7)	41.6(35.9-47.3)	54.7(49.0-60.5)

Some interviews were conducted during the summer months and some respondents would therefore have been on holidays from school. This could account for the majority of the 6.0% of adolescents who indicated they were not currently in school for thirty days prior to being interviewed. The item used to gather information on recent absenteeism from school does not give all participants an equal opportunity to respond. This represents a weakness in the survey instrument. The vast majority of youth denied missing school without the knowledge or consent of a parent or guardian (Table 5.10). Approximately 13.0% of 15-19 year olds currently in school missed classes one or more times throughout the school year without parent/guardian permission. Males tended to miss schools more frequently than females (11.7% vs. 2.6% respectively), a pattern that remained consistent with respect to all degrees of absenteeism measured by the number of days missing school.

Table 5.10 Number of Days Missed from School in The Past Month as Reported By Jamaican 15-19 Year Olds, Jamaica, 2006

Missed school days without permission	Males	Females	Total
0	81.6	91.7	86.6
1-2	6.5	1.9	4.2
3-5	3.5	0.5	2.0
6-9	1.0	0	0.5
> 10	0.7	0.2	0.5
Not applicable-no parental contact	0.4	0.2	0.3
Not in school 30 days prior to interview	6.3	5.5	5.9

Table 5.11 shows data on respondent connectedness to school. Over 80.0% adolescents reported liking school often and of the approximately 60.0% of youth are involved in extra-curricular activities, the majority (>40.0%) indicated that this occurs often. Most adolescents reported that teachers were supportive but a smaller proportion felt that they got along with their teachers. Close to 40.0% of the youth report that they do not try hard at school or that they could try harder and a third of youth reported getting above average grades. The majority of youth plan to finish school.

Table 5.11 Markers of School Connectedness by Sex, Jamaica, 2006

School Connectedness	Males	Females	Total
Involved in extracurricular Activities			
No	42.1	39..9	41.0
Sometimes	14.7	15.4	15.0
Often	43.2	44.8	44.0
Support from teachers			
No	10.2	11.9	11.1
Yes	89.8	88.1	88.9
Get along with teachers **			
Yes	74.2	82.6	78.4
Somewhat	22.5	14.6	18.6
No	3.3	2.8	3.1
Effort at school work			
Don't try hard	9.0	9.5	9.3
Could try harder	28.5	21.5	25.0
Try very hard	62.5	69.0	65.7
Grades at school			
Grades below average	6.9	4.9	5.9
Average grades	59.7	59.9	59.8
Above Average Grade	33.4	35.2	34.3
Like School			
No	2.8	0.5**	1.7
Sometimes	15.5	17.9	16.7
Often	81.7	81.6	81.6
Plan to finish high school			
No	4.9	2.0*	3.5
Yes	95.1	98	96.5

***p< 0.001,**p<0.01 *p<0.05 (sex differences)

5.2 Conclusion

The vast majority of youth 15-19 years old were exposed to school but of the small minority that were not, older youth (aged 17-19) were affected the most. This raises the question as to whether this is a cohort effect where younger children are more likely to be exposed to school due to improved access in more recent years. Similar proportions of boys and girls were represented at all levels in the school system with slightly higher proportion of females having achieved tertiary education. However, females had fewer problems with reading and homework and fewer females were enrolled in classes for children with learning problems.

A large proportion of youth reported that they have problems with their homework while not having much help with this at home. Less than half of the youth who reported reading, learning and behavioural problems were not enrolled in special classes for the management of these problems.

A quarter of 15-19 year old youth are two or more years behind their expected grade level, which is more predominant among males. Larger proportions of older youth have an age-grade deficit of two or more years, supporting the concept of a cohort effect in educational exposure and attainment.

5.3 Recommendations

More attention needs to be paid to providing assistance with homework and more facilities need to be provided to assist youth, who have problems with learning, reading, and behaviour.

Special attention needs to be paid to older youth who may have been deprived of early educational opportunities and have fallen behind or are unable to take advantage of current learning opportunities. The current practice of having children advance in school grades despite not achieving the required standards needs to be reviewed. This will need to be balanced against the problem of having children falling several grades behind their age-grade level. This could be addressed by providing more facilities for youth with learning disabilities outside of the regular schools.

Educational attainment, especially among males, cannot be assessed by grade achievement only and there needs to be a concerted effort to identify persons with learning difficulties so as to create appropriate programmes that address these special needs.

CHAPTER 6

PHYSICAL ACTIVITY, DIETARY PRACTICES & SELF PERCEPTION

Physical activity and dietary intakes are critical to nutritional status including body composition and other physical development markers. There is often some discrepancy between an individual's perceptions of their body size and for example, recognized body size categories as suggested by the World Health Organization (WHO). This mismatch between perception and reality may create difficulties in intervention efforts as satisfaction with self may be a barrier to change (32). Nutritional status is now recognized as an important factor in health and disease. The factors affecting physical activity, dietary practices, and self-perception were explored in the study. .

6.1 Physical Activity

Physical activity and the lack thereof affect several aspects of health. Measuring physical activity is problematic as the most valid measures are difficult to carry out in large epidemiological studies and the more easily executed methods are associated with higher degrees of errors. The study used the International Physical Activity Questionnaire (IPAQ) which aims to capture usual physical activity for the preceding seven (7) days and includes work at home, during transportation, during exercise, recreation, and sport (33). Data gathered were used to categorize participants at low, moderate or high levels of physical activity as determined by the questionnaire protocol and the guidelines for interpretation.

Overall, fewer than 50.0% of respondents reported high levels of physical activity during the preceding week, but it is noteworthy that 31.0 % reported low levels of activity (Table 6.1). There was significant sex differentiation in levels of physical activity, with 60.0% of male youth reporting high levels compared to 30.0% of female youth ($p < 0.001$). In addition, just over 20.0% of males report low levels of physical activity compared to almost 40.0% of females.

Table 6.1 Percentage of 15-19 Years Olds at Different Physical Activity Levels by Sex, Jamaica, 2006

Physical Activity Level (IPAQ)	Male ***	Female	Total
Low	22.5	38.8	30.6
Moderate	17.5	26.5	21.9
High	60.0	34.7	47.5
N	598	719	1317

***P<0.001

Among males there were no age differences in the proportions who reported high levels of activity, ranging from 57.0% to 64.0% while low levels of activity between 20.0-25.0% was reported in all age groups Among females, there was greater variation by age in the proportions classified as highly active with 29.0% of 15-year-olds compared to 44.0% of 18-year-olds falling into this category (Table 6.2).

Table 6.2: Percent of 15-19 Year Old Males and Females at Different Physical Activity Levels, Jamaica, 2006

Age	Low	Moderate	High
Males			
15	20.1	21.9	58.0
16	21.5	21.2	57.3
17	25.8	10.2	64.0
18	24.1	14.5	61.5
19	20.5	17.5	60.2
Females			
15	37.5	33.5	29.0
16	42.9	20.9	36.2
17	36.8	28.3	34.9
18	38.1	17.6	44.3
19	38.6	26.5	34.7

Among males, similar proportions of youth were overweight or obese in the three categories of physical activity (16.0%, 13.9% and 14.8% for low, moderate and high physical activity levels respectively). Among females, the differences were not significant but the highest prevalence of overweight or obesity was found among those reporting high physical activity (Table 6.3).

Table 6.3: Percent of 15-19 Year Old Males and Females at Different Physical Activity Levels by BMI Category, Jamaica, 2006

	BMI Category											
Physical Activity Level	**Underweight**			**Normal**			**Overweight**			**Obese**		
	M	F	T	M	F	T	M	F	T	M	F	T
Low	20.8	14.0	16.5	63.1	64.3	63.9	13.8	16.4	15.5	2.2	5.3	4.2
Moderate	12.3	18.9	16.2	73.7	60.3	65.7	7.6	13.1	10.9	6.3	7.7	7.2
High	13.2	14.8	13.8	72.0	57.0	66.6	10.7	18.6	13.6	4.1	7.4	5.7

M = male; F = female; T = total

6.2 Dietary Practices

Diet is an important contributor to health and has had a major impact on the epidemiological transition. Developing countries like Jamaica have largely overcome under-nutrition and now currently face an epidemic of obesity. As pockets of under-nutrition still do persist, it is important that investigation of factors affecting nutritional status pay attention to both ends of the spectrum.

Approximately 23.0% of the 15-19 year olds (a fifth of males and a quarter of females) interviewed had gone hungry in a usual week because of lack of food in the home and in approximately 8.0% of those reporting hunger these episodes occurred most of the time. Two-thirds of Jamaican youth in this age group have been hungry sometimes (Table 6.4).

Table 6.4: Prevalence (%) of Hunger among Jamaican Youth – 15-19 Years Old, Jamaica, 2006

Food Availability	Male	Female	Total
Gone Hungry**			
Yes	20.0	25.1	22.6
No	80.0	74.9	77.4
Freq. of Hunger[1]			
Rarely	22.8	27.3	25.3
Sometimes	69.7	63.7	66.4
Most times	7.5	9.0	8.4
N	596	717	1313

**$p<0.01$. [1] Of those who reported hunger in a usual week

Using the Caribbean Food and Nutrition Institute (CFNI) guidelines for recommended dietary intakes, the study categorized intakes into optimal (those meeting or exceeding the recommendation) and below-optimal (Table 6.5) categories. Using these criteria, less than one-fifth of youth consumed vegetables at or above the recommended levels with no sex difference while optimal fruit intake was achieved by 38.1% and 44.2% of females and males respectively. Pastries and sweetened beverages intake was categorized differently. The study divided respondents into two categories, seldom and frequent/excessive, representing consumption of sweetened beverages once or less and more than once per week, respectively. This latter classification was also adopted for fast-food intake. Frequent or excessive consumption of pastries was reported by 39.5% of youth with a significantly larger proportion of males (45.5 vs. 33.5% for females; $p<0.002$) while excessive/frequent sweetened beverage consumption was reported by more than 90.0% of males and females. Fast-food consumption was reported less frequently (15.2%) with females reporting a higher frequency than males (17.2 vs. 13.0%; $p<0.05$).

Table 6.5: Percent Distribution of 15-19 Year Olds by Measures of Food Consumption by Sex, Jamaica, 2006

Dietary Intake	Males	Females	Total
Vegetable consumption			
Yes	86.5	82.9	84.7
No	13.5	17.1	15.3
Optimal[#]	18.9	16.5	17.7
Below optimal	81.1	83.5	82.3
Fruit consumption			
Yes	9.0	10.4	9.7
No	91.0	89.6	90.3
Optimal	44.2	38.1	41.2
Below optimal	55.8	61.9	58.8
Pastry Consumption			
Yes	84.9	85.0	85.0
No	15.1	15.0	15.0
Seldom[##]	54.5	66.5	60.5
Frequent/Excessive[###]	45.5	33.5	39.5
Fast Food			
Yes	61.4	70.8	66.0
No	38.4	29.2	34.0
Seldom	87.0	84.8	84.8
Frequent/Excessive	13.0	17.2	15.2
Sweetened Beverages			
Yes	96.6	97.2	96.9
No	3.4	2.8	3.1
Seldom[##]	9.6	7.8	8.7
Frequent/Excessive [###]	90.4	92.2	91.3
Totals	100.0	100.0	100.0
N	592	716	1308

Optimal – meeting or exceeding the recommended dietary intakes

Seldom: once or less per week

Frequent/Excessive: More than once per week

The most frequently used oil for cooking in the households of 15-19 year old was vegetable oil (79.8%). Butter and margarine ranked second with a small minority utilizing oil from animals. The vast majority of youth reported using fat on bread with most reporting soft margarine as the spread (69.7%). There were no sex differences in the use of oils and fats (Table 6.6).

Table 6.6: Percent of Fat and Oil Usage among Jamaican 15-19 Year Old, Jamaica, 2006

Oil & Fat Usage	Males	Females	Total
Type of Oil for Cooking			
Vegetable	79.3	80.2	79.8
Coconut	21.2	19.2	20.2
Butter/Margarine	23.3	22.2	22.8
Oil from animals	1.0	1.4	1.2
Type of fat on bread			
None	7.4	7.9	7.6
Soft margarine	70.0	69.4	69.7
Hard margarine	12.3	12.1	12.2
Butter	22.5	22.4	22.5
Other fats*	1.6	4.6	1.1
N	595	718	1313

* $p<0.05$

The majority of adolescents surveyed used chicken as the main source of protein (91.9%). Half of the respondents ate fish or seafood regularly whilst a quarter of the 15-19 year olds consumed pork or beef regularly (Table 6.7). Milk products were consumed by about 40.0% of youth and a similar proportion consumed peas and beans but less than 10.0% reported soy products as a source of protein. Frying was the most popular method of protein preparation, at approximately 55.0%, while baked or steamed protein, which is the methods recommended to reduce fat intake, was reported by a minority. No sex differences were noted in type of protein or methods of preparation.

Table 6.7: Percentage of Jamaican Youth Who Use Different Sources of Protein and Methods of Preparation, Jamaica, 2006

Protein Intake	Males	Females	Total
Type of Protein			
Chicken	91.8	92.1	91.9
Pork	25.3	25.6	27.4
Beef	31	27.4	25.5
Fish/Seafood	53.3	48.6	50.9
Milk Products	39.9	39.4	39.7
Soy products	8.2	7.3	7.7
Peas/Beans	40.8	38.2	39.5
Preparation of Meat			
Fry	55.6	55.1	55.5
Stew	28.9	26.8	27.9
Bake	5.1	6.9	6
Steam	10.1	11.2	10.7

Table 6.8 illustrates the associations between dietary intakes and BMI. In general, there were no strong associations between dietary intakes and BMI and some relationships were counter-intuitive. On the one hand, compared to youth who failed to meet recommended levels of vegetable consumption, optimal vegetable consumption was associated with lower prevalence of overweight in males (7.2 % vs. 11.9%) and obesity in females (4.7 % vs. 8.0%) but these differences were not statistically significant. More males who report not meeting recommended fruit intake were obese (5.1% vs. 2.7% p = 0.09) compared with those who had optimal consumption. There were no significant association of pastry consumption with BMI. Fast-food and sweetened drink consumption appeared not to be associated with BMI in all but one category where adolescent males who reported consuming fast-food or sweetened drink "often or excessive" had a lower prevalence of obesity than those whose consumption was seldom (2.2% vs. 4.4%; 3.4% vs. 9.1% respectively).

Table 6.8: Percent of Youth in Different BMI Categories Who Had Given Dietary Habits by Sex, Jamaica, 2006

Dietary Intake		Underweight			Normal			Overweight			Obese		
		M	F	T	M	F	T	M	F	T	M	F	T
Vegetable consumption													
optimal# or better	**N**	15.8	15.3	15.6	68.9	60.6	64.7	11.9	16.1	14.0	3.5	8.0	5.8
	Y	11.1	16.0	13.3	74.8	61.5	68.7	7.2	17.8	12.0	7.0	4.7	5.9
Fruit consumption													
optimal or better	**N**	14.2	15.9	15.1	67.2	60.1	63.5	13.4	16.4	15.0	5.1	7.5	6.4
	Y	16.2	15.1	15.7	72.9	61.3	67.6	8.2	16.0	11.8	2.7	7.6	4.9
Pastry consumption													
often or excessive##	**N**	16.3	14.5	15.3	66.5	59.3	62.5	12.7	17.6	15.4	4.5	8.6	6.8
	Y	13.2	16.5	14.6	74.3	64.8	70.4	8.9	13.3	10.7	3.6	5.4	4.4
Fast-food consumption													
often or excessive	**N**	15.2	15.3	15.3	69.1	61.5	65.4	11.3	16.2	13.7	4.4	7.0	5.7
	Y	13.0	16.5	15.0	76.2	57.4	65.6	8.6	16.8	13.2	2.2	9.3	6.2
Sweetened drink consumption often or excessive	**N**	12.0	16.0	13.8	71.3	63.5	67.8	7.6	12.1	9.6	9.1	8.4	8.8
	Y	15.2	15.3	15.2	70.2	60.6	65.4	11.3	16.7	14.0	3.4	7.3	5.4

Optimal – meeting or exceeding the recommended dietary intakes; ## Often/Excessive- More than once per week

M- males; F- females; T -totals

Cooking methods as classified, frying versus other, was not associated with BMI (Table6.10).

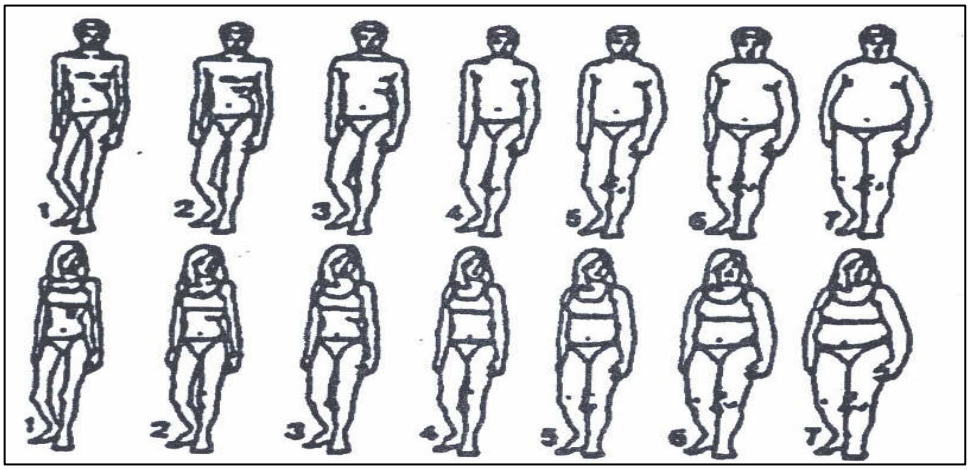
Table 6.9: Percent of Youth in Different BMI Categories Who Used Different Cooking Methods by Sex, Jamaica, 2006

Cooking Method	Underweight			Normal			Overweight			Obese		
	M	F	T	M	F	T	M	F	T	M	F	T
Frying	18.1	16.8	17.4	67.2	60.3	63.8	10.4	15.8	13.1	4.3	7.2	5.7
Other	11.0	14.5	12.7	73.8	60.8	67.4	11.6	16.8	14.2	3.6	7.9	5.7

6.3 Self Perception

Self perception of body size is important to self esteem and may indicate attitudes to body size (32) and inform efforts to intervene in weight reduction as a means to reducing health risk (34). Body silhouettes have been used to study both self-perception and perception of normality and acceptability of body image but few publications attempt to correlate silhouettes with BMI or BMI categories (35). The study used a 7-point sequence of sex specific silhouettes to explore the attitude of Jamaican youth to body image and size. Silhouettes numbers 3 & 4 were designated to be of normal body size with numbers 1 & 2 designated as underweight and numbers 5 - 7 as overweight or obese (Figure 6.1).

Figure 6.1: Silhouette showing body type index for adolescent males and females, Jamaica, 2006



The largest proportion (52.5%) of 15-19 year olds perceived themselves to be of body types 3 - 4 (healthy weight range) and the self-perception of the vast majority (81.7%) clustered between body types 2-4. Approximately 15.7% of youth perceived themselves as being overweight and obese (body types 5-7), while 31.8% perceive themselves as underweight (body types 1 and 2) (Table 6.10). Less than 1.0% perceived their body size to be grossly obese. Respondent's perception of self coincided with their perception of a desirable body image as 80.8% of youth desired a body image consistent with Types 2-4. No youth desired to be grossly obese but approximately 8.9% desired the most underweight image shown in the Type 1 silhouette and this was more frequent among females at 13.0% compared to males 4.8% (Table 6.11). A very small minority of both sexes found the most overweight (silhouettes 6 & 7) to be attractive but almost 12.0% of the youth found the plump silhouette # 5 to be attractive.

Table 6.10: Distribution (%) of Youth who Perceived Their Own Body Type as per Silhouettes, Jamaica, 2006

Silhouette Type	Males	Females	Total
1	6.7	12.1	9.3
2	21.7	23.2	22.5
3	27.1	22.9	25.0
4	32.9	21.9	27.5
5	9.3	16.2	12.7
6	2.3	2.7	2.5
7	0	1.0	0.5
Total	100.0	100.0	100.0
N	595	711	1306

Table 6.11: Distribution (%) of Youth with Desired Body Type as per Silhouettes, Jamaica, 2006

Silhouette Type	Males	Females	Total
1	4.8	13.0	8.9
2	16.1	21.1	18.6
3	29.0	25.3	27.2
4	35.7	28.6	32.2
5	13.0	10.4	11.7
6	1.4	1.0	1.2
7	0	0.6	0.3
Total	100.0	100.0	100.0
N	594	711	1305

Respondents were allowed to choose more than one silhouette as being attractive. More than half of the adolescents reported that they perceived the male silhouettes 3 and 4 to be attractive at 58.0% and 60.0% are respectively, with no sex differences (Table 6.12). Silhouettes 5-7 were found to be least attractive with silhouette 5 being attractive to 14.6% of youth and 2.0% or less

being attracted by silhouettes 6 and 7. Compared to the uniform unattractiveness of silhouettes 6 and 7, silhouettes 1 and 2 at the other end of the spectrum, enjoyed much more popularity with 13.2% considering silhouette 1 attractive and more than a third of youth finding silhouette 2 attractive. While there was no sex difference in the desirability of silhouettes 3 and 4, it does appear that preference for the underweight appearance of the male silhouette was more frequent among females while the overweight appearance was more favoured among males (Table 6.12).

Table 6.12: Distribution (%) of Youth Who Perceived The Given Male Body Types as Attractive as per Silhouettes, Jamaica, 2006

Thinks male silhouette attractive	Males	Females	Total
1	12.4	14.0	13.2
2	30.7	40.9	35.8
3	57.2	59.2	58.2
4	59.4	60.6	60.0
5	18.2	11.0	14.6
6	2.4	1.5	2.0
7	2.4	0.3	1.4

Table 6.13 shows the frequency with which the youth find the females silhouettes to be attractive. As in the case of male silhouettes, silhouettes 3 and 4 are most attractive to the youth and there is no sex difference. Larger proportions of both males and females are attracted to underweight (1and 2) compared to overweight (5-7) female silhouettes (15.2 – 45.2% compared to 0.8 -19.0%). Similar to the finding in respect of the male silhouette, among the minority who found the extreme appearances to be attractive, a larger proportion of females appear to be attracted to the thinner female appearance while a larger proportion of males find the overweight female appearance to be attractive.

Table 6.13: Distribution (%) of Youth Who Perceived The Given Female Body Types as Attractive as per Silhouettes, Jamaica, 2006

Thinks female silhouette attractive	Males	Females	Total
1	15.2	22.1	18.6
2	32.7	45.2	38.9
3	59.0	59.7	59.3
4	61.7	54.0	57.8
5	19.0	14.5	16.8
6	4.1	3.1	3.6
7	2.1	0.8	1.5

Table 6.14 shows that more than half (61.8%) of Jamaican adolescents regarded male silhouettes 3 and 4 as the most healthy and there appeared to be no significant sex differences. Underweight and overweight male body types were perceived as being most healthy by 18.6% and 19.6% of youth. Whilst there were no statistically significant sex differences, less males reported thinking that the

underweight male body types were most healthy (16.8% vs. 20.3) and less females reported that they thought the overweight and obese body types were most healthy (16.6% vs. 22.6%).
Approximately 20% of the respondents reported they think that female body types that were underweight are healthy and more females than males (24.2% vs. 16.3%) reported this perception (Table 6.14). This could reflect a common perception among adolescent females that "the slimmer the healthier" commonly seen in adolescent girls. Again the majority of youth, more than 60.0%, perceived that silhouettes 3 and 4 were the most healthy body types with males showing a preference for the larger of the two frames (i. e. silhouette # 4) at 39.0% vs. 33.7%.

Table 6.14: Distribution (%) of Youth Who Perceived The Given Male and Female Body Types as Healthy as per Silhouettes, Jamaica, 2006

Male silhouette	Males	Females	Total
1	5.8	6.7	6.3
2	11.0	13.6	12.3
3	22.4	29.3	25.8
4	38.2	33.8	36.0
5	15.0	10.8	12.9
6	2.5	2.1	2.3
7	5.1	3.7	4.4
Female silhouette			
1	4.8	7.3	6.0
2	11.5	16.9	14.2
3	23.8	24.2	24.0
4	39.0	33.7	36.4
5	13.4	12.1	12.7
6	2.6	2.4	2.5
7	4.9	3.4	4.1
Totals	100.0	100.0	100.0
N	595	711	1306

Most adolescents (68.5%) thought they were currently at their correct weight and more males (74.2%) than females (62.7%) had this perception. About 12.0 % of youth thought they were underweight with more males (14.0%) expressing this opinion compared to 11.4% females (Table 6.15). Approximately 19.0% of adolescents reported that they perceived themselves as being overweight with more females (25.9%) making this assessment compared to males (11.8%).

The concept of self reporting body measures by body image perception (silhouettes) is useful in large epidemiological surveys (32;35). The study has attempted to correlate BMI categories and body image perception.

Table 6.15: Distribution (%) of Youth According to Perceived Weight Categories, Jamaica, 2006

Perceived Weight***	Males	Females	Total
Right Weight	74.2	62.7	68.5
Little Overweight	10.0	20.0	15.0
Lot Overweight	1.8	5.9	3.8
Underweight	14.0	11.4	12.7
Totals	100.0	100.0	100.0
N	586	707	1293

*** P<0.000

More than half (52.8%) of the adolescents reported that they perceived themselves as being normal weight and significantly more males were of this perception than their female counterpart (60.8 vs. 44.6 p<0.001). Table 6.16 also shows that a third (31.9%) of youth perceived their body type to be underweight and the remaining 15.0% thought they were overweight/obese with seemingly more females perceiving that they were underweight and two times more females than males perceiving they were overweight/ obese.

Table 6.16: Percent of Youth in Nutritional Status Categories as per Silhouettes, Jamaica, 2006

Perception of body type	Male	Female	Total
Normal Weight	60.8	44.6	52.8
Underweight	28.9	35.0	31.9
Overweight/Obese	10.3	20.4	15.3

The majority of adolescents (74.3%) who perceived their body type as normal were in fact normal (Table 6.17). Of the others who thought their body type was normal 11.4% and 14.3% were underweight and overweight/obese by BMI categories, respectively. More females than males (17.7 % vs. 11.8 %) who perceive themselves as being normal weight were in fact overweight or obese. Among those adolescents who perceived themselves as being underweight, the body type of the vast majority (72.6%) corresponded to the healthy weight BMI category. A few (22.7%) had the correct perception and the remaining 4.8%, while perceiving themselves to be underweight, had an overweight or obese BMI with more females incorrectly perceiving their body type in this category. Approximately 32.0% of youth who perceived their body type to be overweight or obese were really normal weight and 2.3% were underweight. More males than females who perceived themselves as overweight/obese were in fact normal weight.

Table 6.17: Distribution (%) of Body Type Perception among Jamaican Adolescents according to WHO BMI Categories, Jamaica, 2006

Perceived body type	WHO BMI Categories								
	Normal Weight			Underweight			Overweight/Obese		
	M	F	T	M	F	T	M	F	T
Normal Weight	75.9	72.1	74.3	12.3	10.2	11.4	11.8	17.7	14.3
Underweight	79.7	66.6	72.6	16.8	27.6	22.7	3.5	5.8	4.8
Overweight/Obese	39.9	28.2	32.2	2.8	2.1	2.3	57.3	69.8	65.5

M- males; F- females; T- total

The use of body silhouettes may be a practical tool in self reporting of BMI or weight perception especially among adolescents. Table 6.18 shows that 43.5% of adolescents correctly perceived their body type in respect of corresponding BMI category and this is lower that reported in the literature(32;35).

Table 6.18: Proportion (%) of Adolescents Who Correctly Perceived Their Body Type Regardless of BMI Categories, Jamaica, 2006

Correctly Perceived body type	Male	Female	Total
Yes	43.1	43.9	43.5
No	57.0	56.1	56.5

6.4 Conclusion

Physical activity levels in Jamaican youth varied significantly by sex, with males reporting much higher frequencies of high physical activity, and females reporting higher frequencies of low or moderate activity. There is no evidence from these data that physical activity was associated with BMI. While this finding is not consistent with our hypothesis, the results may be affected by measurement error. The IPAQ which was used to measure physical activity has been associated with misclassification; in particular, this questionnaire has been associated with over-estimating physical levels(36-39) .

Persistent hunger was infrequent although some reports of hunger were mentioned by up to one fifth of this population. The vast majority of youth consumed less vegetables and fruits than is recommended by regional nutritional authorities (CFNI), while also consuming excessive amounts of sweetened drinks. The majority of youth consumed pastry and fast food but only a minority reported frequent or excessive consumption of these foods. Frying remains the most frequent method of protein preparation. This study has not demonstrated any association between dietary intakes and BMI.

The majority of youth perceived the normal body silhouette as being healthy and attractive while just under half of youth correctly classified themselves with respect to their measured BMI. The most frequent occurrence of misclassification between perceived and measured BMI category was among those who perceived themselves to be underweight where the majority were either normal or overweight.

6.5 Recommendations

Despite the failure to demonstrate an association between physical activity levels and overweight or obesity in this study, evidence from existing literature supports a recommendation that physical activity levels among youth be increased in order to reduce overweight and obesity among youth. The low physical activity levels reported, especially by females, suggests that increased physical activity is likely to be beneficial to the health of youth. Opportunities for increased physical activity should be provided in schools accompanied by incentives to participate in these activities.

The report of hunger along with the 15.0% frequency of underweight suggests that food availability in the homes of adolescents should receive some attention.

Creative ways should be found to encourage increased fruit and vegetable consumption among youth through increased availability and legislation.

Adolescents should be educated on the relationship between body size and health and they should be educated in the preparation of healthy meals and snacks both at home and at school.

CHAPTER 7

MEDICAL CARE

7.1 Medical History & Health Seeking Behaviour

Though chronic medical illnesses are infrequent in the studied age group, recent trends in obesity and asthma indicate the importance of accounting for these conditions even at this age. Figure 7.1 shows that asthma was the most commonly reported health condition among 15-19 years olds at approximately 10.0 % for both sexes. The 5-6.0% frequency of a history of broken bones is also worthy of note. No reported health condition showed significant sex differences. Respiratory diseases, such as bronchitis and pneumonia, were reported at much lower frequencies of 2.0% or less (Table 7.1). Chronic non-communicable diseases including hypertension, diabetes mellitus and obesity were infrequently reported with only obesity exceeding 1.0% frequency. Sickle Cell trait and disease was reported among 2.5% and 0.8% of youth respectively. Over 40.0% of youth reported bleeding gums whilst brushing their teeth. Five per cent (5.0%) of these youth reported being on regular medication for their various illnesses, with significantly more females than males using medications. Less than 15.0% of youth were taking dietary supplements, with significantly more females taking iron supplements (Table 7.1).

Figure 7.1: Top 5 Reported Medical Conditions of 15- 19 year olds, Jamaica, 2006

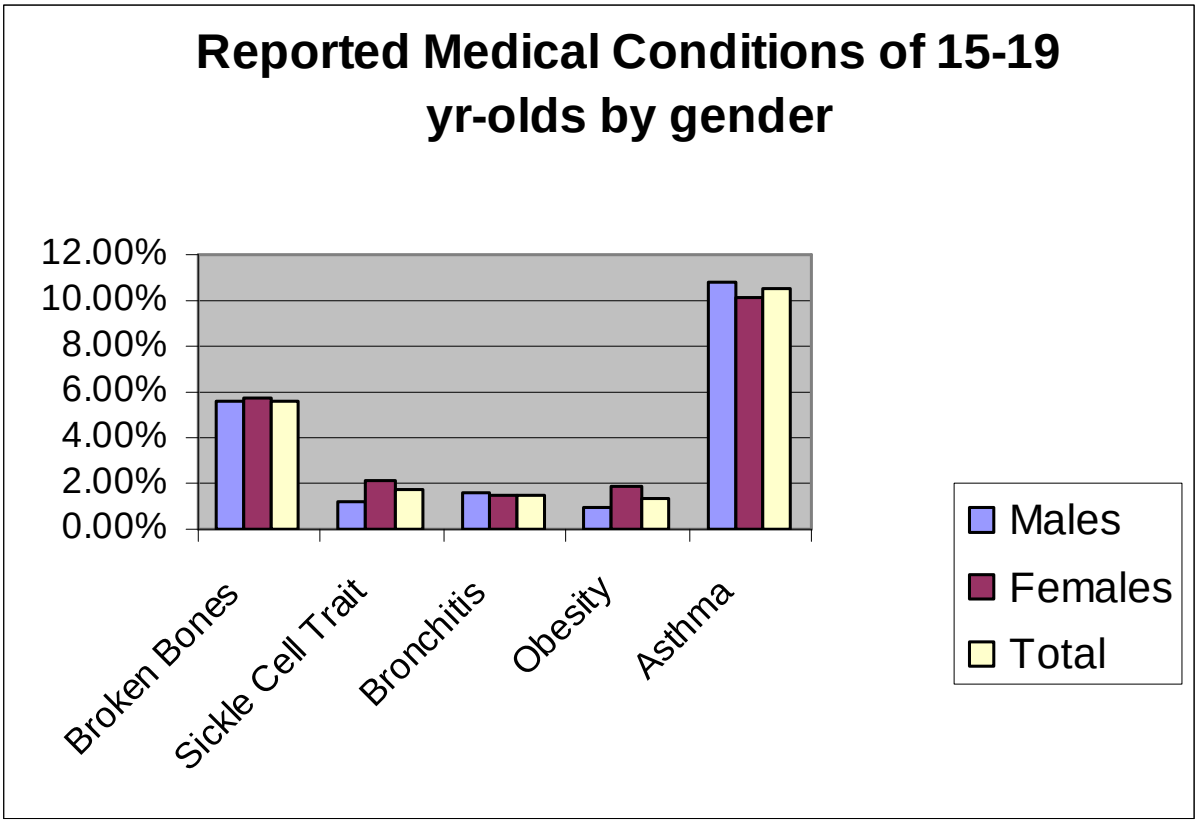


Table 7.1: Percentage of Youth with Given Medical Conditions, Medication and Supplement Use among 15-19 Year Olds in Jamaica, Jamaica, 2006

Medical Condition	Males	Females	Total
Respiratory Diseases			
Asthma	10.8	10.1	10.5
Bronchitis	1.6	1.5	1.5
Pneumonia	0.7	0.6	0.7
Chronic Diseases			
Heart Disease	0.5	0.3	0.4
Diabetes Mellitus	0.2	0.6	0.4
Hypertension	0.7	1.2	0.9
High Cholesterol	0.3	0.1	0.2
Obesity/Overweight	0.9	1.9	1.4
Kidney Disease	0.3	0.7	0.5
Other Conditions			
Rheumatic Fever	1.1	1.4	1.2
Sickle Cell Disease	0.3	1.2	0.8
Sickle Cell Trait	1.2	2.1	1.7
Broken Bones/Fractures	5.6	5.8	5.7
Bleeding Gums	41.1	45.4	43.3
Medications			
Taking Medication for Illness**	3.6	6.3	4.9
Taking Vitamin Supplements	13.0	16.0	14.5
Taking Iron Supplement*	9.5	14.0	11.8
N	597	719	1316

** P<0.01

About a third of youth who reported taking medication in the past month were asthma sufferers and this was noticeably greater than for any other condition. Medications for other respiratory conditions (colds/flu/allergies) were taken by 12.5% of youth who reported taking medication in the past month. Although there were no reported eye conditions, respondents reported using eye medications more consistently. Of note is that 1.6% of youth report taking some form of anxiolytic and 1.6% took prescribed gastric medications whilst 3.1 % were on medication for chronic diseases conditions. Only 7.0% of females reported taking hormonal contraceptives and 18.6% reported taking pain killers in the past month. (Table 7.2).

Table 7.2: Percent of Youth Who Used Different Types of Medication, Jamaica, 2006

Medication Taken	Males	Females	Total
Pain Killers	9.5	18.6	15.6
Anxiolytics	0.0	2.3	1.6
Antibiotics	0.0	7.0	4.7
Antifungal/Skin creams	9.5	2.3	4.7
Cold/Flu/Allergies	14.3	11.6	12.5
Contraceptives	0.0	7.0	4.7
Anticonvulsants	4.8	4.7	4.7
H_2 Agonists	4.7	0.0	1.6
Eye Ointments and drops	4.8	0.0	1.6
Chol/BP/DM Treatments[#]	4.8	2.3	3.1
Asthma	33.3	30.2	31.3
N	21	43	64

 # chol- cholesterol, BP-blood pressure, DM- diabetes mellitus

Table 7.3 shows the preferred choices of health care facilities reported by respondents. Very few youth report not having health care and even fewer chose either a dispensary (pharmacy) or traditional/herbalist for health care advice. More males (2.7%) reported having no health care than females (1.3%). Western sources of health were chosen by the vast majority of youth of both sexes but there were some differences between the three leading facilities (public clinic, hospital and private care) with a larger proportion of females tending to favour private practice compared to males (47.1% vs. 38.8%; $p<0.02$) (Figure 7.2). There appeared to be no difference in access to healthcare by single years of age.

Table 7.3: Percent of Youth with Preference of Given Health Care Facilities, Jamaica, 2006

		Age					Total
	Health Facility	**15**	**16**	**17**	**18**	**19**	
Males	No Health Care	1.9	1.3	4.4	2.1	4.5	2.7
	Public Clinic	29.6	37.6	34.4	33.6	25.2	32.6
	Hospital	28.2	26.0	23.3	21.2	22.6	24.9
	Private Practice	40.3	33.8	36.4	43.1	44.8	38.8
	Dispenser/Traditional	0.0	1.36	1.5	0.0	2.9	1.0
Females	No Health Care	0.3	2.8	1.5	0.8	1.5	1.3
	Public Clinic	39.0	33.6	27.0	22.0	26.3	31.2
	Hospital	19.1	18.7	23.4	20.4	18.0	19.9
	Private Practice	41.6	44.2	48.1	55.1	54.2	47.1
	Dispenser/Traditional	0.0	0.8	0.0	1.8	0.0	0.5
Both Sexes	No Health Care	1.1	2.1	3.0	1.4	3.1	2.0
	Public Clinic	34.5	35.6	31.0	27.4	25.7	31.9
	Hospital	23.5	22.3	23.4	20.8	20.5	22.4
	Private Practice	50.0	39.0	41.8	49.5	49.2	42.9
	Dispenser/Traditional	0	1.1	0.8	1.0	1.6	0.7
N		376	309	274	204	140	1303

Figure 7.2: Distribution (%) of Healthcare Access among 15-19 years old Adolescents by Sex, Jamaica, 2006

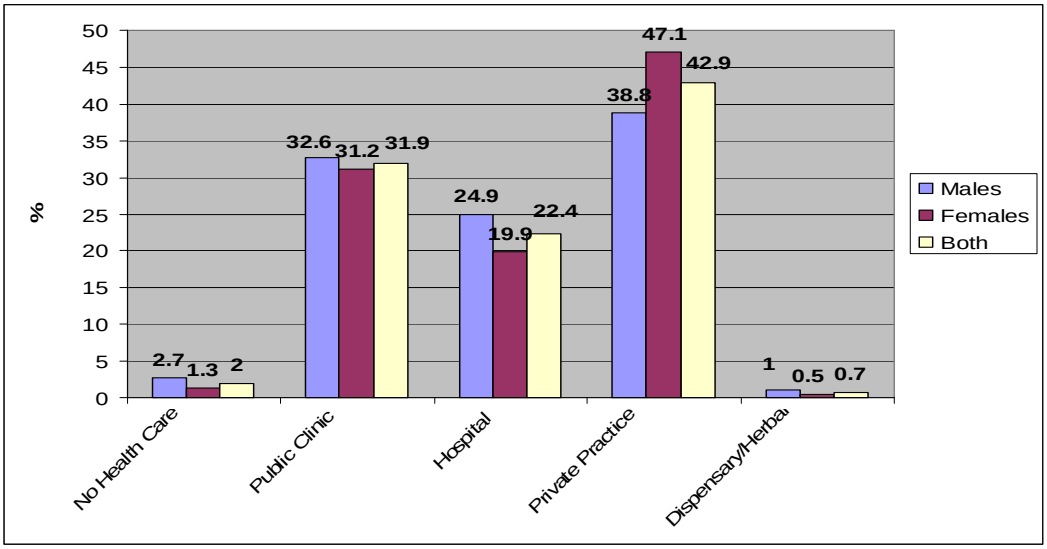


Table 7.4 shows the urban-rural distributions of preferred health care facility by sex. Few youth report not having access to health care in both urban and rural settings. Private practice appears to be the preferred source for health care in both rural and urban areas. Rural youth appeared to make more frequent use of hospital over public clinics when compared to urban youth who appeared to have the opposite tendency. These differences achieved statistical significance for the group as a whole and for females (P<0.05).

Table 7.4: Percent of Urban and Rural Youth with Preference of Healthcare Facilities, Jamaica, 2006

	Health Facility	Urban	Rural
Males	No Health Care	2.9	3.2
	Public Clinic	32.7	29.4
	Hospital	20.2	28.6
	Private Practice	42.0	38.8
	Dispenser/Traditional	2.2	0.0
Females	No Health Care	0.9	2.1
	Public Clinic	33.4	23.8
	Hospital	15.3	26.5
	Private Practice	50.1	46.9
	Dispenser/Traditional	0.3	0.8
Both Sexes*	No Health Care	1.9	2.7
	Public Clinic	33.1	26.5
	Hospital	17.8	27.5
	Private Practice	46.0	42.9
	Dispenser/Traditional	1.3	0.4
	Totals	100.0	100.0
	N	732	571

*p<0.05

Overall, a minority of youth reported frequent medical visits, more so among females than males (12.5 vs. 6.1%; p<0.001). The proportion reporting frequent visits increased with age (6.7 to 14.3 %) but this was almost entirely due to the trend among females from 7.2% in 15 year olds to 22.9% in 19 year olds respectively (Table 7.5).

Table 7.5: Frequency of Medical Visits by Age and Sex, Jamaica, 2006,

	Medical Visits								
	Male			**Female**			**Total**		
Age	*Rare*	*Occasional*	*Frequent*	*Rare*	*Occasional*	*Frequent*	*Rare*	*Occasional*	*Frequent*
15	54.8	38.9	6.2	56.5	36.4	7.2	55.7	37.6	6.7
16	60.8	34.6	4.6	48.8	40.4	10.7	54.8	37.6	7.7
17	57.3	33.8	8.9	45.8	38.9	15.3	51.9	36.2	11.9
18	65.3	30.9	3.7	64.1	21.4	14.6	64.6	25.6	9.8
19	66.4	27.9	5.7	45.0	32.2	22.9	55.7	30.0	14.3
Total	59.5	34.4	6.1	52.7	34.8	12.5	56.0	34.6	9.3

The vast majority of 15-19 year old female youth (98.5%) had had their menarche at the time of the survey. Among female youth, 7.1% reported having had a Pap smear and 6.1% had this done in the last two years. Over 28% of females reported having a vaginal exam in the last three years with the majority (21.5%) occurring in the last two years (Table 7.6).

Table 7.6: Proportion (%) of Females with Reported Gynaecological Health Profile, Jamaica, 2006

Gynaecological Profile	Percent
Had pap smear done	
Never	92.9
3 or more years ago	1.0
Within past two years	6.1
Had vaginal exam done	
Never	71.4
3 or more years ago	7.1
Within past two years	21.5
Started menstruating	
No	1.5
Yes	98.5

7.2 Conclusion

While the reported prevalence of asthma was similar to the known estimate, that for sickle cell trait was much less and probably reflects the symptomatic nature of the one versus the asymptomatic nature of the other (40).

Youth visited health care facilities infrequently and had a preference for private health care.

7.3 Recommendations

Reaching youth with health information would require forums other than health care providers. Schools and communities may provide better forums for health promotion among youths.

CHAPTER 8

EMOTIONS AND MENTAL HEALTH

8.1 Prevalence of Depressive Symptoms

Participants in the study were interviewed with respect to their mental health using the Ministry of Health screening tool used in the mental health clinics. Depression was diagnosed in the presence of any suicidal ideation or attempt. In the absence of reports of suicidal tendencies, a positive response to five or more questions on emotions in the screening instrument was used in the classification. (41)

Table 8.1 shows the frequencies of reporting the occurrence of nine of the questions by sex. The most frequently occurring depressive symptoms are: "feeling down/depressed", "little interest/pleasure in activities", "change in appetite" and "change in sleep pattern", all reported by more than 30.0% of youth. All symptoms were reported significantly more frequently in females compared to males, with the exception of "feeling guilty or worthless" where the marginal female excess was not statistically significant.

Table 8.1: Prevalence (%) of Mental Health Symptoms by Sex, Jamaica. 2006

Mental Health Symptoms	Male	Female	Total	P value
Feeling Hopeless or Stopped Activities^	12.0	20.4	16.2	< 0.001
Feeling Down/Depressed+	24.5	41.3	32.9	< 0.001
Little Interest/pleasure in Activities +	31.8	38.8	35.3	<0.02
Change in Appetite+	33.0	42.9	37.9	< 0.01
Change in Sleeping Pattern+	26.5	34.6	30.6	< 0.01
Feeling Guilty/Worthless+	13.4	14.8	14.1	NS
Consider Suicide	2.8	9.7	6.2	< 0.001
Attempted Suicide	1.4	5.0	3.2	< 0.001
Planned Suicide	1.1	5.7	3.4	< 0.001
N	596	716	1312	

^ Symptoms prolonged for two or more consecutive weeks
+Symptoms prolonged for more than one month

Figures 8.1a -8.2b show frequencies of occurrence (Never or Rarely, Sometimes, Often or always) of mental health symptoms by sex while Figures 8.3a & 8.3b show the frequency of depression as

defined above. Females reported significantly higher frequencies of loneliness/sadness or wanting to cry and worry that interfered with sleep.

Frequency (%) of Interference in Sleep Patterns in Jamaican Males (Figure 8.1a) and Females (Figure 8.1b) Aged 15-19 Years respectively, Jamaica, 2006

Fig 8.1a

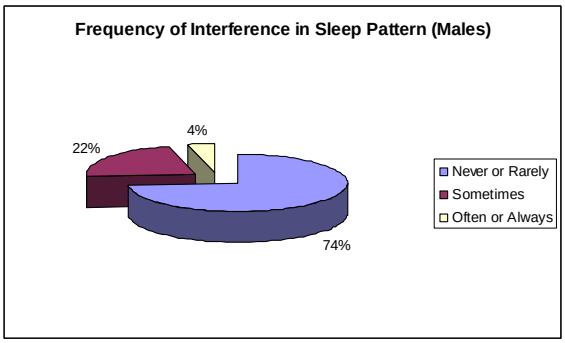
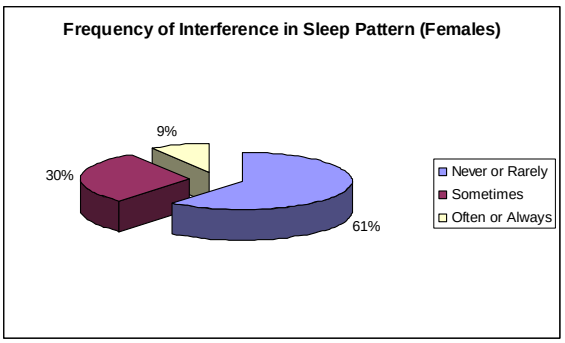


Fig 8.1b



Frequency (%) of feeling lonely or wanting to cry in Jamaican males (Figure 8.2a) and females (Figure 8.2b) aged 15-19 years respectively, Jamaica, 2006

Fig 8.2a

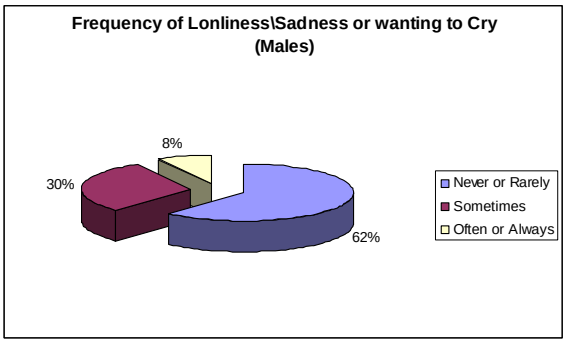
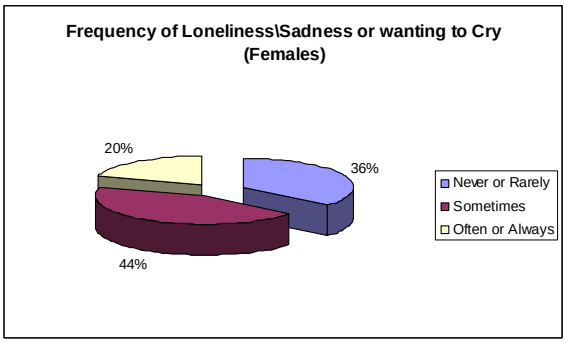


Fig 8.2b



Prevalence (%) of depression in Jamaican males (Figure 8.3a) and females (Figure 8.3b) aged 15-19 years respectively, Jamaica, 2006

Fig 8.3a

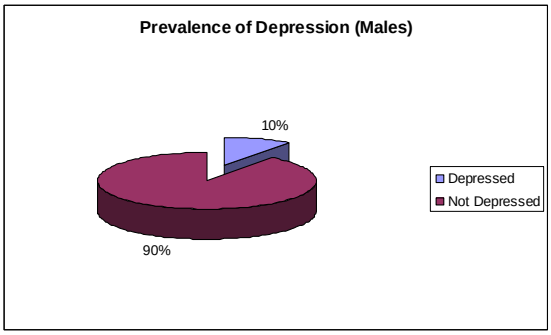
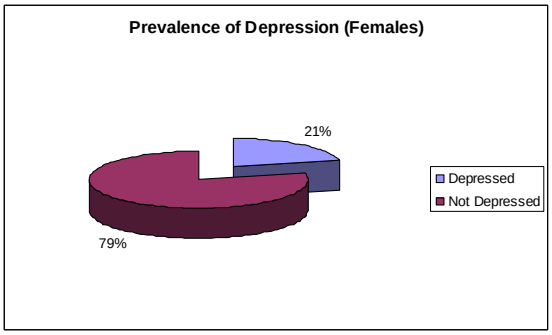
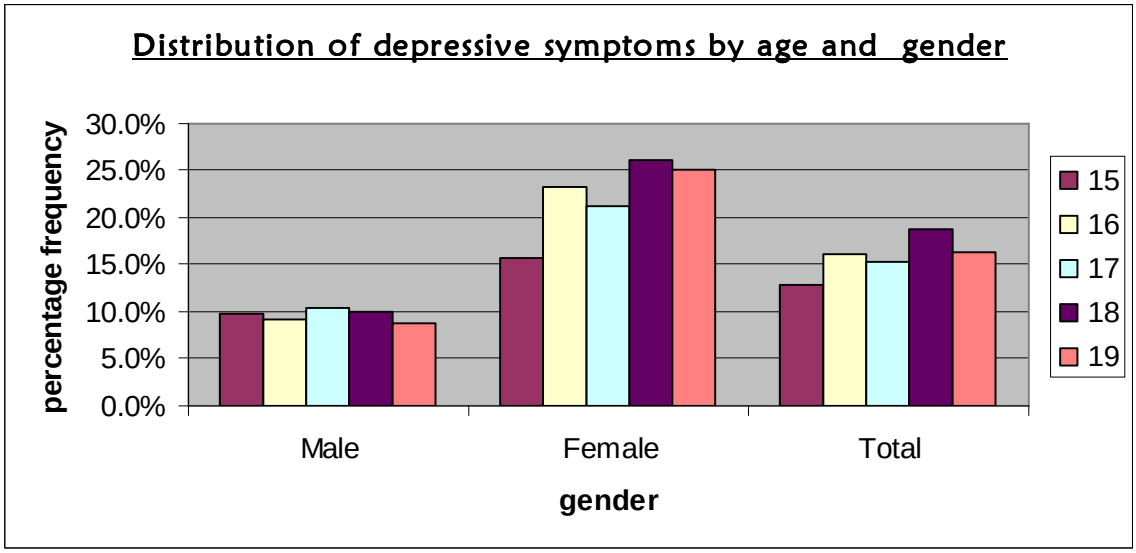


Fig 8.3b



As many as one in every five female youth reported feeling lonely or sad and wanting to cry. Depression was reported by 15.5 % of youth 15-19 years, (9.7% of males and 21.3% females, p< 0.001) (Figure 8.3a and 8.3b). There was no age variation in the prevalence of depression with age among males while among females there was a tendency for increased prevalence with age (15.7% at age 15 yrs and 25.1% at age 19yrs), although this was not statistically significant (Figure 8.4).

Figure 8.4: Distribution (%) of Depressive Symptoms in Jamaican 15-19 year Olds by Age and Sex, Jamaica, 2006



More than 5.0% of youth reported knowing of a family member or friend who had attempted suicide. Of the adolescents who reported that they had a family member who attempted suicide, almost one-fifth (19.7%) reported that the family member actually succeeded in committing suicide (Table 8.2). There appeared to be a significant sex difference among adolescents who reported having a family member who attempted and/or committed suicide. Significantly more females than males (14.1% vs. 7.5%) had friends who attempted suicide; in contrast more males (16.7%) than females (9.7%) had friends who actually committed suicide. More males than females also had family members who committed suicide (72.8% vs. 16.7%)

Table 8.2: Percentage of 15- 19 Year Olds with Friends or Family Members Who Have Tried or Committed Suicide, Jamaica, 2006

Mental Health	Male	Female	Total
Attempted Suicide- Family*	3.3	7.0	5.2
Committed Suicide- Family (of those who attempted)	27.8	16.7	19.7
Attempted Suicide- Friend***	7.5	14.1	10.8
Committed Suicide- Friend (of those who attempted)	16.7	9.7	11.9

*p<0.05; *** p<0.001

In the past year, Jamaican 15-19 year olds were most concerned about passing exams (77.3%) and getting a job (69.9%) when older and this was more frequent in females than males (Table 8.3). A larger proportion of male youth were concerned about their own alcohol drinking and drug abuse while more female youth were concerned about physical abuse, sexual abuse and violence in the community.

Table 8.3: Percent of 15-19 Year Olds with Given Concerns in The Past Year within and across Sex, Jamaica, 2006

Concerns in past year	**Males**	**Females**	**Total**
Personal alcohol drinking or drug abuse**	11.0	5.4	8.3
Parent alcohol drinking or drug abuse	11.2	11.9	11.6
Alcohol drinking and drug use in community	30.6	34.8	32.7
Physical Abuse***	13.2	26.0	19.5
Being sexually abused***	7.2	28.3	17.6
Violence in the home	16.3	19.8	18.0
Violence in the community*	43.6	50.1	46.8
Getting or making someone pregnant	31.1	40.3	35.7
Getting HIV/AIDS	46.1	45.6	45.9
Being treated unfairly because of race/religion	14.3	17.1	15.7
Parents leaving you	29.5	35.2	32.3
Getting a job when older	67.1	72.8	69.9
Passing exams	74.7	79.8	77.3
N	596	716	1312

*p<0.05; ** p<0.01; *** p<0.001

Variation with age in the proportions of youth with various concerns did not show any consistent pattern but it does appear that concerns about exams were lower among older youth (Table 8.4). Some concerns (getting someone pregnant, getting HIV/AIDS, violence in the community) appeared to increase with age up to 18 years and decrease among 19 year olds. In the total population of 15-19 year olds violence in the community and getting HIV/AIDS were the most common areas of concern 47% and 46% respectively.

Table 8.4: Age-Specific Percentages of 15-19 Year Olds with Given Concerns in The Past Year, Jamaica, 2006

Concerns in past year	**15**	**16**	**17**	**18**	**19**
Personal drinking or drug abuse	9.0	5.5	9.9	9.2	8.2
Parent drinking or drug abuse	13.2	12.4	12.2	9.2	7.4
Drinking and drug use in community	29.2	26.5	34.8	28.7	35.9
Physical Abuse	33.8	26.7	36.5	33.2	34.1
Being sexually abused	19.2	21.2	17.0	22.8	16.9
Violence in the home	17.6	18.5	20.9	15.1	16.0
Violence in the community	44.5	46.9	47.5	49.4	47.7
Becoming or making someone pregnant	27.7	33.1	41.1	46.7	34.9
Getting HIV/AIDS	37.8	40.2	49.9	55.8	57.5
Being treated unfairly because or race/religion	12.0	17.1	14.9	20.9	15.5
Parents leaving you	36.8	32.1	32.2	31.1	23.4
Getting a job when older	67.5	72.9	72.2	72.5	62.3
Passing exams	84.8	85.2	73.0	63.3	56.5
N	380	311	277	204	140

Only a small proportion (4.4%) of the 15-19 years olds said they had no close friends. (Males 3.3%, Females 5.4%) (Table 8.5) There was a marked sex difference for those teenagers reporting having three or more close friends, with males having significantly more close friends than females. (70.8% and 47.2% respectively; $p<0.001$). A third of teenagers stated that these close friends had a strong influence on them with the quality of influence being good in 61.0% of the cases. Only 4.0% of respondents reported that their close friends had a bad influence, with more males having friends who influence them negatively than females (5.0% and 2.0% respectively).

Table 8.5: Distribution (%) of The Nature of Peer Influence among Jamaican 15-19 Year Olds, Jamaica, 2006

Characteristic	Male	Female	Total
Number of Close Friends* **			
None	3.3	5.4	4.4
One	6.4	18.6	12.4
Two	19.5	28.8	24.1
Three or more	70.8	47.2	50.1
Influence of close friends			
Strong	31.9	30.0	31.0
Somewhat	23.9	24.4	24.7
None	44.2	45.6	44.9
Quality of influence			
Good	57.0	64.9	60.9
Bad	5.0	2.0	3.5
Both	32.7	28.0	30.3
Neither	5.4	5.2	5.3
Totals	100.0	100.0	100.0
N	595	713	1308

`***P=0.000

A small proportion of youth (7-13%) reported being often or always irritable or angry in the past year while the majority experienced these emotions only sometimes or less frequently and there seemed to be no sex differences. The majority of respondents in the 15-19 age group had a positive outlook and 97.5% of them thought they would live to be at least 25 years old (Table 8.6). The majority of youth were happy most of the time (67.9%) with significantly more males saying they had been happy in the past year than females (71.6% vs. 64.1%). Sixty-seven percent had never had thoughts of hurting or killing someone although a third said they sometimes thought about it and 2.0% entertained these thoughts all the time with no differences between the sexes. Significantly more females said they would be very happy if they moved to a new neighbourhood. ($p<0.05$)

Table 8.6: State of Mind of Jamaican 15-19 Year Olds, Jamaica, 2006

Characteristic	Male	Female	Total
Irritable in past year			
Never	30.8	27.4	29.1
Rarely	25.4	24.6	25.0
Sometimes	39.0	39.0	39.0
Often	4.3	7.4	5.8
Always	0.6	1.7	1.2
Angry in past year			
Never	13.4	9.8	11.6
Rarely	19.9	19.6	19.7
Sometime	56.0	54.6	55.3
Often	9.7	12.7	11.2
Always	1.0	3.4	2.2
Happy in past year			
Never	1.8	0.9	1.4
Rarely	2.4	3.5	2.9
Sometime	24.3	31.4	27.8
Often	50.9	45.4	48.1
Always	20.7	18.7	19.8
Thoughts of hurting or killing someone			
Always	2.9	2.6	2.8
Sometime	31.5	29.1	30.3
Never	65.6	68.3	66.9
Feelings about moving to new neighbourhood			
Very unhappy	12.4	11.2	11.8
Unhappy	29.0	25.5	27.2
No difference	28.2	25.5	26.8
Happy	20.9	22.6	21.8
Very happy	9.5	15.2	12.4
Think you will live to be at least 25yrs old			
No	1.8	3.0	2.5
Yes	98.2	97.0	97.5
Totals	100.0	100.0	100.0
N	549	653	1202

8.2 Depressive Symptoms and Sexual Behaviour

We explored the associations between eight depressive symptoms and certain behaviours (Table 8.7). Several depressive symptoms are associated with sexual activity in Jamaican youth and the associations are stronger and more frequent in females. Females who reported sadness, feeling down or depressed, worry which affected sleep and finding little pleasure in doing things all reported a higher prevalence of sexual initiation compared to those who did not report those symptoms. These associations were weaker and inconsistent among male youth. A consistently higher proportion of male youth with the depressive symptoms of interest reported involvement in forced/unwanted sex but none of these differences were statistically significant. The differences in the frequencies of reported mental health symptoms were smaller and varied in direction among female youth and in the case of four of the symptoms the differences were statistically significant, largely driven by the difference among males and suggesting that failure to achieve statistical significance among males may be due to small sample sizes in these sub-group analyses. Feeling sad and hopeless or down depressed were both associated with increased involvement in a pregnancy among males and females and both sexes. The use of family planning was only associated with a single symptom: females who reported a change in sleep pattern in the last month were less likely to use family planning than those who did not report this symptom. Condom use was also less frequent among females who felt sad or hopeless for more than two weeks in the last year. None of the symptoms examined were associated with contraceptive use or condom use among male youth.

Table 8.7: Prevalence (%) of Sexual Behaviours in 15-19 Year Olds with Given Depressive Symptoms, Jamaica, 2006

Depressive Symptom	Used Family Planning			Condom Use at Last sex			Ever had sex			Forced/ Unwanted sex			Pregnant or Got a girl pregnant		
Sad or lonely in past year	M	F	T	M	F	T	M	F ***	T***	M	F	T**	M*	F	T*
N	90.4	85.2	88.4	88.3	77.9	84.3	73.3	53.3	63.7	5.3	19.8	11.1	8.3	26.0	15.0
Y	95.6	82.8	86.8	91.6	72.7	78.3	86.7	80.4	82.1	11.9	22.4	19.4	1.2	36.7	25.3
Sleep affected by worry in past	M	F	T	M	F	T	M	F***	T***	M	F	T*	M	F	T
year **N**	90.9	85.6	88.7	88.5	77.6	84.1	73.3	53.3	63.7	5.3	19.8	11.1	7.2	28.2	15.6
Y	91.1	80.0	83.2	90.5	71.8	77.0	86.7	80.4	82.1	11.9	22.4	19.4	17.7	32.7	28.0
Sad or hopeless for more than	M	F	T	M	F*	T**	M *	F ***	T***	M	F	T*	M***	F***	T***
two weeks in **N**	90.3	86.9	89.0	88.3	80.1	85.1	72.2	50.9	62.2	5.0	20.2	10.8	5.5	23.7	12.5
past year **Y**	93.5	78.9	84.9	91.5	67.7	77.5	84.4	73.1	77.3	9.2	20.5	15.9	18.8	42.1	32.2
Feeling down, depressed in past	M	F	T	M	F	T	M*	F***	T**	M	F	T*	M*	F**	T***
month **N**	90.3	88.4	89.7	88.1	78.1	84.7	71.5	48.3	61.6	4.6	19.0	9.5	5.6	20.9	10.7
Y	92.2	81.2	85.8	89.9	75.3	81.4	80.2	65.7	71.1	8.0	21.2	15.6	13.1	36.5	26.4
Little pleasure in usual activities in	M	F	T	M	F	T	M*	F***	T***	M	F	T	M	F	T*
past month N	90.3	88.0	89.5	89.2	78.4	85.2	71.6	48.3	60.7	4.3	21.0	10.5	6.4	26.6	13.9
Y	91.8	80.8	86.3	87.4	75.1	81.2	78.3	66.6	91.9	8.0	18.4	13.3	10.1	30.6	20.3
Change in appetite in past	M	F	T	M	F	T	M	F*	T	M	F	T	M	F**	T***
month N	92.0	84.5	89.2	90.3	75.6	84.8	74.6	52.1	64.4	4.8	20.5	10.5	6.5	20.7	11.7
Y	88.5	85.0	86.6	85.0	77.9	81.3	72.0	61.1	65.8	7.3	19.7	13.9	10.1	37.8	24.6
Change in sleeping pattern	M	F*	T	M	F	T	M	F***	T*	M	F	T*	M	F	T**
in past month N	91.3	87.7	90.0	89.0	79.0	85.3	73.2	50.2	62.7	4.7	19.1	9.9	6.5	24.3	13.0
Y	89.4	80.7	84.6	87.5	73.4	79.7	75.5	65.3	69.5	8.1	21.7	15.6	10.9	35.1	23.9
Feeling guilty or worthless in past	M	F	T	M	F	T	M	F**	T*	M	F	T	M*	F	T**
month N	90.6	84.7	88.2	88.4	76.6	83.5	73.3	52.8	63.3	5.9	19.6	11.5	6.2	25.9	14.2
Y	92.4	84.6	88.3	89.6	77.1	83.1	75.6	71.1	73.1	4.0	22.2	13.5	16.9	39.4	28.6
N	408	355	763	397	347	744	597	716	1313	406	354	760	399	342	741

*p<0.05 ; ** p<0.01 ; *** p<0.001

Table 8.8 shows the associations explored between suicidal ideation and sexual activity. Family planning use was less frequent among males and females who reported considering attempting suicide but the difference only achieved statistical significance for the overall group. Planning or attempting suicide was not associated with the prevalence of family planning use. The level of condom use was generally lower among those who reported suicidal ideation but none of these differences were statistically significant. Larger proportions of females with suicidal ideation reported ever having sexual intercourse, but this difference achieved statistical significance in only two of the three markers tested. Female youth who reported suicidal ideation also reported a higher rate of experiencing forced/unwanted sex and pregnancy, but these differences were not always significant. There were no associations between suicidal ideation and sexual activity or pregnancy occurrence among males.

Table 8.8: Prevalence (%) of Sexual Behaviours in 15-19 Year Olds with Given Suicidal Tendencies, Jamaica, 2006

Suicidal ideation in the last year	Used Family Planning			Used a condom (at last sex)			Ever had sex			Forced/ Unwanted sex			Been or Got Pregnant		
Considered attempting suicide	M	F	T*	M	F	T	M	F**	T	M	F	T*	M	F*	T***
N	91.1	85.7	88.9	88.8	77.0	84.1	74.1	53.9	71.3	5.7	18.3	10.7	7.8	25.0	15.0
Y	80.7	77.9	78.4	80.7	73.7	75.1	63.5	73.3	64.5	0.0	30.0	24.0	4.0	45.1	36.7
Attempted suicide	M	F	T	M	F	T	M	F*	T	M	F	T	M	F*	T**
N	91.0	85.3	88.6	89.0	76.4	83.7	73.7	54.6	64.4	5.7	19.8	11.5	7.8	26.9	15.6
Y	100.0	77.4	82.3	82.3	80.1	80.6	88.7	75.6	77.9	0.0	24.2	19.2	0.0	49.9	39.7
Made a plan to commit suicide	M	F	T	M	F	T*	M	F	T	M	F	T*	M	F	T*
N	91.2	86.1	89.1	89.3	78.3	84.8	73.9	55.4	65.0	5.7	19.3	11.2	7.7	26.7	15.4
Y	100.0	71.2	76.5	76.3	65.7	67.7	84.7	71.7	73.8	0	31.4	25.6	8.7	44.9	37.7

*p<0.05 ; ** p<0.01 ; *** p<0.001

Youth who reported depressive symptoms also reported a higher level of involvement in violence as perpetrators or victims. These differences were statistically significant for seven of eight markers among females and four of eight among males (Table 8.9). Among females, use of illegal drugs during the past year was associated with experiencing feelings of guilt or worthlessness, changes in sleeping pattern, and sadness or loneliness. In addition, for four out of the eight depressive symptoms examined (sad or lonely in the past year; sleep affected by worry in the past year; feeling sad or hopeless for more than two weeks in the past year; and change in sleep patterns in the past month), rates of drunkenness were significantly higher among females who experienced the symptom than among their counterparts who did not.

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Table 8.9: Prevalence (%) of Risk Behaviours in 15-19 Year Olds with Given Depressive Symptoms, Jamaica, 2006

Depressive Symptom		Involved in Violence			Became Drunk in past year			Used Illegal Drugs in past year		
Sad or lonely in past year		M	F*	T*	M	F**	T***	M	F*	T
	N	20.8	15.2	18.2	21.9	9.7	17.3	17.6	4.4	11.5
	Y	26.8	24.4	25.1	10.5	31.2	26.1	19.4	10.8	13.4
Sleep affected by worry in past year		M	F	T	M	F**	T*	M	F	T
	N	21.2	16.3	18.9	21.0	10.8	16.9	17.3	6.0	11.9
	Y	23.7	23.4	23.4	24.5	40.3	36.1	30.0	3.1	10.4
Sad or hopeless for more than two weeks in past year		M *	F*	T**	M	F***	T***	M	F	T
	N	19.7	14.9	17.5	20.3	9.2	16.0	17.5	5.2	11.7
	Y	31.4	24.0	26.8	27.7	29.9	29.0	20.0	7.5	12.3
Feeling down, depressed in past month		M **	F***	T***	M	F	T	M	F	T
	N	18.5	11.4	15.5	19.4	9.8	16.1	17.4	4.9	12.0
	Y	29.5	24.3	26.2	25.7	20.0	22.4	18.9	6.8	11.3
Little pleasure in usual activities in past month		M ***	F ***	T***	M	F	T*	M	F	T
	N	16.1	13.7	15.0	18.5	11.1	15.6	16.4	4.4	10.8
	Y	32.3	21.5	26.4	26.2	19.3	22.8	20.6	6.6	13.0
Change in appetite in past month		M *	F **	T ***	M	F	T	M	F	T
	N	18.4	12.5	15.7	20.9	11.3	17.2	17.8	5.3	12.1
	Y	27.4	22.9	24.8	21.6	18.9	20.2	17.5	6.3	11.1
Change in sleeping patterns in past month		M	F*	T**	M	F*	T	M	F*	T
	N	19.5	14.5	17.2	21.4	9.3	17.0	17.4	4.2	11.4
	Y	26.7	21.5	23.7	20.5	21.7	21.2	18.7	8.3	12.6
Feeling guilty or worthless in past month		M	F***	T***	M	F	T	M	F*	T**
	N	19.4	17.2	16.6	19.9	13.5	17.2	16.2	4.5	10.5
	Y	30.6	25.2	32.7	30.1	10.6	25.2	24.4	11.8	17.6
	N	597	719	1316	588	713	1301	596	719	1315

*p<0.05; ** p<0.01; *** p<0.001

A larger percentage of youth who reported suicidal ideations were involved in violence and became drunk in the past year compared to those without such symptoms (Table 8.10). In females, these associations were significant (P<0.001) for all three ideations. The use of illegal drugs by female youth also occurred more frequently in those with suicidal ideation than those without; although this failed to achieve statistical significance in cases of reported attempted suicide. In males, two of the three markers of suicidal ideation were associated with involvement in violence and becoming drunk while none of them were associated with the use of illegal drugs. These data suggest that suicidal ideation was associated with involvement in violence, becoming drunk and using illegal drugs.

Table 8.10: Prevalence (%) of Risk Behaviours in 15-19 Year Olds with Given Suicidal Tendencies, Jamaica, 2006

Suicidal ideation in the last year	Involved in violence			Became drunk in past year			Used illegal drugs in past year		
Considered attempting suicide	M	F***	T***	M*	F ***	T***	M	F**	T
N	20.8	14.5	17.8	19.9	10.4	16.0	17.8	4.7	11.5
Y	39.8	39.1	39.2	51.7	40.9	43.9	16.8	14.8	15.3
Attempted suicide	M***	F***	T***	M***	F***	T***	M	F	T
N	20.8	15.7	18.4	20.6	11.8	16.9	17.5	5.7	11.7
Y	65.6	38.1	43.1	84.1	52.3	57.3	27.3	6.3	10.1
Made a plan to commit suicide	M*	F***	T***	M	F***	T***	M	F**	T
N	20.2	15.1	17.8	20.2	10.5	16.3	17.8	5.2	11.7
Y	55.1	46.9	48.2	60.7	54.2	54.9	33.4	20.0	22.1

*p<0.05; ** p<0.01; *** p<0.001

8.3: Conclusion

Depressive symptoms were common among youth and are more frequent among females than males. Suicidal ideation occurred in approximately one in sixteen youth. A substantial proportion of youth were concerned about getting a job when older, passing examinations, violence in their communities and contracting HIV/AIDS. Approximately one in ten youth were usually or always angry and this constitutes a reservoir for ill-tempered behaviour.

Depressive symptoms among females were associated with increased involvement in sexual activity and pregnancy while among males it is associated with forced and unwanted sex. Depressive symptoms were also associated with a higher level of involvement in violence and the use of illegal drugs.

8.4 Recommendations

Educators and all adults who interact with youth should be made competent to detect the features of depression and be aware of the appropriate response including knowledge of referral system. Youth should have increased knowledge about and access to caring and resourceful counselling facilities in order to adequately deal with their concerns, allay fears and provide alternative course of action.

CHAPTER 9

RESILIENCY

The study explored the presence of factors associated with resiliency against high risk behaviour among youth. These included caring relationships in the home along with high expectations and feelings of connectedness to family. Similar relationships in the community, including school, are also known to improve resiliency against risk-taking behaviour.

Table 9.1 shows results on three markers of youth connectedness to parents. There appear to be no sex differences in respondent's reports of parental understanding of their worries. One third of 15-19 year olds reported that their parents sometimes understood their worries; a quarter stated that they never discussed their worries with a parent, and 15.0% said that they had no worries. More than one in ten youth (12.3%) reported that their parents do not understand their worries. Less than fifty per cent of parents are believed to know how youth spend their free time and this was more so among females than males. An important minority (1 in 6) of youth reported that their parents had no knowledge of how they spent their spare time indicating that they may have felt unconnected to their parents. This situation was more prevalent among males than females. Parents usually knew the whereabouts of adolescents and this was more frequently reported by females than males (64.7% vs. 53.5%).

Table 9.1: Perception of Parental Care and Understanding among Jamaican 15-19 Year Olds, Jamaica, 2006

Characteristic	Male	Female	Total
Parent Understand Worries			
No	12.8	11.8	12.3
Sometimes	32.2	35.4	33.7
Most times/Always	9.3	9.5	9.4
I have no worries	16.7	12.9	14.8
Never discussed	25.2	24.1	24.7
Parent knowledge of free time use			
No	17.8	14.9	16.4
Sometimes	43.8	37.2	40.5
Most times/Always	38.4	47.9	43.1
Parent knows whereabouts			
No/ Never/Rarely	10.2	7.1	8.7
Sometimes	36.3	28.2	32.2
Most times/Always	53.5	64.7	59.1
N	581	703	1284

Table 9.2 shows the frequency of recreational activities enjoyed by youth. Approximately 41.0% of 15-19 year olds said that they spent no evenings engaging in fun or recreational activities. A higher proportion of females than males reported no fun or recreational activities (47.5% vs. 34.4%). While a similar proportion of males and females enjoyed 1-2 evenings of recreation per month, as the frequency of recreational days per month increased, the disparity between males and females widened, with 14.0% males reporting spending five or more evenings in recreational activities compared with 5.0% of females. The frequency of recreational activities was significantly greater among males than females.

Table 9.2: Distribution (%) of Frequency of Recreational Activities of Jamaican 15- 19 Year Olds by Sex, Jamaica, 2006

Fun or recreation in evenings per week***	Males	Females	Total
0	34.4	47.5	40.9
< 1	6.5	7.6	7.0
1-2	30.3	30.4	30.3
3-4	14.8	9.5	12.3
≥ 5	14.0	5.0	9.5
Total	100.0	100.0	100.0
N	585	703	1288

****P=0.000(Sex differences significant in all category)*

Table 9.3 shows that more than a quarter of Jamaican youth spend five or more hours watching television on weekdays and more than 50.0% watched three or more hours on weekdays. Television viewing increased on weekends with 44.0% watching five or more hours per day and almost 70.0% watching three or more hours. A larger proportion of female than male youth watched television, for greater than 5 hours, both during the week (30.2% vs. 27.3%) and on weekends (48.2% vs. 41.6%). This in contrast to the sex difference observed for recreational activities.

Table 9.3: Distribution (%) of Duration of Television Watching amongst Jamaican 15- 19 Year Olds, Jamaica, 2006

Characteristic	Males	Females	Total
Number of hours watching TV/week day			
< 1	17.5	12.7	15.1
1-2	28.5	28.7	28.6
3-4	26.7	28.4	27.6
5-6	17.7	15.8	16.7
7-8	3.6	6.1	4.8
>8	6.0	8.3	7.2
Number of hours watching TV/week end	**Males**	**Females**	**Total**
< 1	15.7	9.6	12.7
1-2	20.2	20.0	20.1
3-4	22.5	22.3	22.4
5-6	17.5	21.1	19.3
7-8	11.0	9.0	10.0
>8	13.1	18.1	15.6

9.1 Religion

The vast majority of youth reported affiliation to Christianity (Table 9.4). Non-Christian religious affiliation remained infrequent at all ages being less than 4.0%. Among older youth the proportion of adolescents reporting no religious affiliation increased with age rising from 12.2% among 15 year olds to 19.7% among 19 year olds. More female reported Christian affiliation than males and the difference appeared to be accounted for by the larger proportion of males reporting no religious affiliation (20.6%vs.10.0%, $p<0.001$)

Table 9.4: Distribution (%) of Religious Affiliation by Age and Sex, Jamaica, 2006

Age	Non Christian	Christian	No Religion	Total	N
15	3.3	84.5	12.2	100.0	368
16	3.9	83.3	12.8	100.0	300
17	1.9	82.0	16.1	100.0	265
18	3.1	77.1	19.8	100.0	196
19	0.7	79.3	19.7	100.0	136
Sex					
Male	3.6	75.9	20.6	100.0	562
Female	2.1	87.9	10.0	100.0	703
Total	2.8	82.0	15.2	100.0	1265

Church attendance showed a similar trend with more females attending church regularly than their male counterparts, with almost twice as many males stating they had not attended church in the past month (Table 9.5).

Table 9.5: Distribution (%) of Frequency of Church Attendance by Sex, Jamaica, 2006

Church Attendance	Males	Females	Total
Never	17.3	10.4	13.7
Occasionally	47.6	41.9	44.6
Often	35.0	47.7	41.8
Total	100.0	100.0	100.0
N	460	636	1096

Table 9.6 shows the frequency of markers of caring attitude and high expectations inside and outside the home. Less than a quarter of youth felt that there was an adult at home who cared about their school work and less than a half reported they had an adult with whom they could talk about problems. About 59.0% of respondents had an adult who gave them adequate attention and slightly more (64.7%) had an adult at home who would listen. Almost 80.0% of youth felt that adults at home expected them to obey the rules, give their best effort and that they would be a success. There were no sex differences in these in these estimates. Three-quarters of respondents reported that they had an adult outside the home that really cared, and between 55.0% and 68.0% had an adult who noticed their absence, noted their discontent, and was willing to listen to them. At the same time about 60.0% could identify an adult outside the home who noticed a job well done and approximately 75.0% had an adult who believed that they would be a success and who always wanted them to give their best effort. None of these estimates showed any significant sex differences.

Table 9.6: Percentages (%) of Jamaican 15-19 Year-Olds Reporting The Respective Resiliency Characteristics, Jamaica, 2006

Resiliency Index	Males	Females	Total
At home – Caring relationships			
Adult interested in their school work	21.4	23.3	22.4
Adult with whom to talk about problems	49.3	48.1	48.7
Adult who gives adequate attention	59.1	59.0	59.0
Adult willing to listen	66.0	63.4	64.7
At home – High Expectations			
Adult expecting obedience to rules	77.4	77.9	77.6
Adult who always wants your best effort	79.1	84.3	81.7
Adult who believes you will be a success	76.6	76.6	76.6
Outside home – Caring relationships			
Adult who really cares	70.8	74.9	72.8
Adult who notices absence	56.4	59.4	57.9
Adult who notices your discontent	55.3	63.1	59.2
Adult willing to listen	63.8	67.8	65.8
Outside home – High Expectations			
Adult who notices a job well done	56.9	61.4	59.1
Adult who believes you will be a success	74.6	77.2	75.9
Adult who always wants your best effort	74.4	77.1	75.7

Using the individual scores on indicator of resiliency shown in Table 9.6 and combining the variables classified as caring and those classified as high expectations, the study analyzed the variables by creating the categories of "having" or "not having" caring relationships and high expectations inside and outside their homes. The presence of these characteristics, along with presence of an additional characteristic, "someone to trust", was used to identify those respondents with resiliency or protective factors and the frequency with which these factors occurred. The associations with perceived risk factors were used to explore the role of resiliency/protective factors in risky behaviour.

Table 9.7 presents the frequency of these characteristics among respondents. The proportion of youth reporting the presence of resiliency/protective factors was lowest with respect to caring relationships within the home; only 53.1% of youth were so classified. This is much lower than the proportion that had caring relationships outside the home (approximately 70.5%). On the other hand, high expectations were equally prevalent within and outside the household (80-84.0%). Similar to responses in Table 9.6, there appeared to be no sex differences in the frequency of the characteristics reported. There does however appear to be a mismatch between expectations and caring in the households of Jamaican youth. While over 80.0% of youth reported households with adults who were perceived as having with high expectations of them, only 54.0% of youth perceived caring relationships with these adults. Perhaps, the youth felt that they did not have the support needed to meet the expectations that adults had of them.

Table 9.7: Percentage of Youth with Given Resiliency Factors by Sex, Jamaica, 2006

Factor Present	**Males**	**Females**	**Total**
Caring Relationships in the home	54.4	51.7	53.1
High Expectations in the home	82.9	84.5	83.7
Caring Relationships outside the home	68.9	72.2	70.5
High Expectations outside the home	79.9	80.9	80.4
Someone who you trust	74.9	73.8	74.4
N	587	708	1295

Table 9.8 shows the frequency of resiliency/protective factors by age. In the home, there was a tendency for both caring relationships and high expectations to decline among older youth and while there was some fluctuation in the pattern for caring relationships, the decline for high expectations was similar and both trends achieved statistical significance. The pattern was the same with respect to these two characteristics outside the home with the decline in the frequency of caring relationship with age failing to achieve conventional levels of statistical significance. The frequency with which youth reported that they had someone to trust did not appear to vary significantly with age and was reported by just over 70.0% of youth.

Table 9.8: Age-Specific Percentages of Youth with Given Resiliency/Protective Factors by Age, Jamaica, 2006

Protective Factors	**15**	**16**	**17**	**18**	**19**	**Total**	***P***
Caring Relationships in the home							*0.0052*
Yes	60.1	49.2	55.0	47.3	47.0	53.1	
No	39.9	50.8	45.0	52.7	53.0	46.9	
High Expectations in the home							*0.0000*
Yes	92.5	84.2	79.7	77.7	75.1	83.7	
No	7.5	15.8	20.3	22.3	24.9	16.3	
Caring Relationships outside the home							*0.0942*
Yes	72.1	75.1	66.7	70.6	64.3	70.5	
No	27.9	24.9	33.3	29.4	35.7	29.5	
High Expectations outside the home							*0.0116*
Yes	85.1	82.9	77.7	77.4	72.5	80.4	
No	14.9	17.1	22.3	22.6	27.5	19.6	
Someone who you trust							*0.3035*
Yes	74.0	78.3	74.6	69.5	73.1	74.4	
No	26.0	21.7	25.4	30.5	26.9	25.6	

While the majority (72.3%) of youth reported that they are rarely if ever the victim of mean treatment by adults, a small proportion of them (10.3%) reported having an adult being mean to them often or always. Another 17.0% of youth report that this mean treatment by adults occurred "sometimes". Overall, this implied that a quarter of respondents in this age group were exposed to unkind treatment by an adult with noticeable frequency. In most cases the adult was someone in their community (40.6%), followed by a friend (24.4%) and a family friend (13.7%). Aunts, uncles and cousins are each mentioned about 10.0% of the time. Significantly more girls reported that their father, stepfather, or stepmother was mean to them than the boys (6.2 vs.2.0; 2.1 vs. 0.7; 4.1 vs. 0.7) respectively. (Table 9.9)

Table 9.9: Proportion of 15-19 Year Old Jamaican Adolescents Who Reported Mean Treatment by Given Adults, Jamaica, 2006

Characteristic	Male	Female	Total
Frequency of mean treatment			
Rarely/Never	73.0	71.6	72.3
Sometimes	17.7	17.1	17.4
Often/Always	9.2	11.3	10.3
Relationship of Mean adult to respondent			
Father	2.0	6.2	4.3
Mother	1.3	1.6	1.5
Stepfather	0.7	2.1	1.5
Stepmother	0.7	4.1	2.6
Guardian	0.0	0.5	0.3
Brother	0.7	2.6	1.7
Sister	2.0	4.6	3.5
Uncle	11.8	7.7	9.5
Aunt	9.8	12.2	11.1
Cousin	11.8	12.8	12.3
Grandfather	2.0	2.6	2.3
Grandmother	2.0	2.1	2.0
Someone in community	43.0	38.7	40.6
Pastor/church people	1.3	1.5	1.4
Friend	24.4	19.2	21.5
Family friend	13.7	13.1	13.4

The study also examined the community environment to identify the nature and frequency in which youth encountered negative experiences. The presence of unemployed youth on the streets of the communities was the most frequently reported community characteristic for 15-19 year olds (85.4%) and it was marginally more frequently reported by females than males (87.2% vs. 83.6%). Over half reported seeing uncollected garbage and drug use on the street, and a third reported witnessing drugs being sold in the community, graffiti on the walls, abandoned cars, and gangs in the street. Sighting of gunmen was reported by close to 30% while prostitution was witnessed by about 13.0%. Females and males reported similar experience of these negative occurrences (Table 9.10).

Table 9.10: Proportion of 15-19 Year Old Jamaican Adolescents Who Reported Seeing the Following Items in Their Community within and across Sex, Jamaica, 2006

Items	Male	Female	Total
Garbage on street/sidewalk	52.4	50.9	51.6
Graffiti painted on the walls	32.6	34.0	33.3
Abandoned cars	39.2	38.2	38.7
Unemployed youth on the street	83.6	87.2	85.4
Gangs on the street	37.8	37.8	37.8
Prostitute or sex workers	14.1	12.8	13.5
Gunmen	28.6	29.0	28.8
People selling drugs	39.5	36.6	38.1
People using drugs	53.5	51.9	52.7
N	596	719	1315

Tables 9.11 and 9.12 show the associations between protective/resiliency factors and the frequency of some risky behaviour. Four of the five protective/resiliency factors were associated with significantly reduced prevalence of sexual activity among males while only the in-home protective factors appeared to be associated with the frequency of sexual activity among females. The level of condom use was greater in persons with resiliency factors but the difference was only significantly associated with high expectations within the home for both sexes. Ganja smoking was associated with all five protective/resiliency factors for both males and females with reduced smoking reported by those having resiliency attributes. Among females, a high expectation in the home was strongly associated with reduced frequency of pregnancy. Except for caring relations in the home among females, the protective factors were not associated with reported violence and there were no associations with reported drunkenness in either sex. There were no associations between the resiliency/protective factors and involvement in pregnancies among male youth either.

Table 9.11: Prevalence (%) of Risky Behaviour among Adolescent Males by Protective Factors, Jamaica, 2006

Protective Factor	Sexually Active	Condom Use	Ganja use	Pregnancy	Physical violence	Been Drunk in past year
Caring Relationships in the home						
Yes	64.3*	88.4	20.8*	4.4	23.4	15.4
No	74.2	85.8	30.3	8.8	21.7	22.8
High Expectations in the home						
Yes	66.2*	90.2***	22.9**	5.4	21.4	17.4
No	81.0	75.3	35.4	11.0	28.1	24.8
Caring Relationships outside the home						
Yes	66.2 *	86.8	21.5**	6.8	22.4	17.4
No	74.7	86.8	33.0	5.9	23.1	22.0
High Expectations outside the home						
Yes	66.0*	88.2	22.4**	5.6	23.7	19.0
No	79.2	84.0	35.4	9.3	18.8	19.5
Someone who you trust						
Yes	67.2	89.0	22.4**	6.6	22.8	18.6
No	73.2	82.6	32.5	6.3	22.1	20.3

*p<0.05 ; ** p<0.01 ; *** p<0.001

Table 9.12: Prevalence (%) of Risky Behaviour among Adolescent Females by Protective Factors, Jamaica, 2006

Protective Factor	Sexually Active	Condom Use	Ganja use	Pregnancy	Physical violence	Been Drunk in past year
Caring Relationships in the home						
Yes	41.3**	81.1	6.9**	23.4	13.9 *	14.6
No	57.4	77.3	17.5	26.6	20.9	15.1
High Expectations in the home						
Yes	44.5**	83.4**	9.1***	16.7***	16.3	14.9
No	72.8	65.0	26.9	52.0	22.7	14.6
Caring Relationships outside the home						
Yes	48.8	80.1	10.3*	23.6	17.6	15.8
No	50.0	76.1	16.4	29.3	16.7	12.8
High Expectations outside the home						
Yes	47.8	78.3	10.6**	22.8	17.8	14.5
No	54.3	80.7	17.7	33.4	15.7	16.1
Someone who you trust						
Yes	50.5	79.5	10.2*	23.0	18.8	15.6
No	46.0	77.2	16.4	30.9	13.9	13.3

*****p<0.05 ; ** p<0.01 ; *** p<0.001

Tables 9.13 to 9.17 provide estimates of the odds of engaging in risky activities in the presence of resiliency/protective factors. Caring relationships in the home were associated with a significant reduction in the odds of sexual activity, ganja use and female involvement in violence (Table 9.13). High expectations in the home were protective against sexual activity, pregnancy and ganja use and were associated with increased odds of using a condom at the last sexual encounter (Table 9.14). Adolescents who did not have caring relationships outside the home were 76% more likely to have used ganja in some form but this factor was not significantly associated with any other risk behaviour (Table 9.15). High expectations outside the home were protective against risky behaviours such as sexual activity, pregnancy and ganja use (Table 9.16). Compared with adolescent males who had someone to trust males who did not were 1.5 times more likely to have had sex. Adolescents who did not have someone to trust were 75.0% more likely to have used ganja in some form.

From the tables below, it appears that adolescents who had caring relationships inside and outside the home, high expectations inside and outside the home and having someone to trust were less likely to engage in risky behaviour. In particular each of these factors, with the exception of caring relationships outside the home, was protective against sexual activity. High expectations inside the home influenced more risky behaviours than the other resiliency measures.

Table 9.13: Relative Odds of Risky Behaviour among Persons with Caring Relationships in the Home, Jamaica, 2006

Caring Relationships inside the Home			
Factors	**Odds Ratio**	**P-value**	**95% CI**
Sexual activity***	0.57	<0.001	0.45-0.71
Condom use	1.23	0.294	0.83-1.81
Gotten someone/been pregnant	0.74	0.196	0.47-1.17
Involved in physical violence - males	1.10	0.558	0.79-1.54
Involved in physical violence – females***	0.61	0.0098	0.40-0.92
Ever been drunk	0.71	0.158	0.43-1.15
Ganja use***	0.50	<0.001	0.36-0.70

*** p<0.001

Table 9.14: Relative Odds of Risky Behaviour among Persons with High Expectations in the Home, Jamaica, 2006

High Expectations inside the Home			
Factors	**Odds Ratio**	**P - value**	**95% CI**
Sexual activity***	0.36	< 0.001	0.25-0.53
Condom use***	2.87	< 0.001	1.78-4.64
Ever got someone pregnant	0.52	0.106	0.23-1.15
Ever been pregnant***	0.19	< 0.001	0.11-0.31
Involved in physical violence	0.68	0.054	0.46-1.01
Ever been drunk	0.76	0.218	0.49-1.18
Ganja use – males***	0.54	0.009	0.35-0.85
Ganja use – females***	0.27	< 0.001	0.16-0.46

*** p<0.001

Table 9.15: Relative Odds of Risky Behaviour among Persons with Caring Relationships Outside of The Home, Jamaica, 2006

Caring Relationships outside the home			
Factors	**Odds Ratio**	**P - value**	**95% CI**
Sexual activity	0.80	0.127	0.61-1.07
Condom use	1.14	0.615	0.69-1.88
Gotten someone/been pregnant	0.86	0.425	0.59-1.26
Involved in physical violence	1.01	0.971	0.72-1.40
Ever been drunk	0.90	0.675	0.55-1.48
Ganja use***	0.57	< 0.001	0.42-0.76

P<0.001

Table 9.16: Relative Odds of Risky Behaviour among Persons with High Expectations outside the Home, Jamaica, 2006

High Expectations outside the Home			
Factors	**Odds Ratio**	**P – Value**	**95% CI**
Sexual activity***	0.64	0.006	0.47-0.88
Condom use	1.19	0.523	0.69-2.04
Gotten someone/been pregnant ***	0.59	0.009	0.40-0.88
Involved in physical violence	1.25	0.203	0.88-1.78
Ever been drunk	0.95	0.88	0.52-1.75
Ganja use***	0.54	< 0.001	0.39-0.73

P<0.001

Table 9.17: Relative Odds of Risky Behaviour among Persons Who Have Someone to Trust, Jamaica, 2006

Factors	**Odds Ratio**	**P - value**	**95% CI**
Sexual activity – males*	0.66	0.043	0.44-0.99
Sexual activity - females	1.12	0.746	0.80-1.56
Condom use	1.45	0.073	0.97-2.17
Gotten someone/been pregnant	0.75	0.237	0.46-1.22
Involved in physical violence	1.20	0.353	0.81-1.78
Ever been drunk	1.03	0.926	0.55-1.93
Ganja use***	0.57	<0.001	0.42-0.77

p<0.05, ***p< 0.001

Youth who were not employed reported higher frequencies of caring relationships and high expectations in the home (54.3% vs. 38.8%; 85.7 vs. 60.6% respectively). Union status was associated with high expectations in the home, with a higher proportion of those youth not in a union reporting high expectations compared to those in a union. High expectations and caring relations in the home were significantly associated with parental presence at home and church attendance. Parental presence and attending church often were both associated with a significantly larger proportion of adolescents reporting that they had caring relations at home. There was no statistically significant association between resiliency/protective factors outside the home and employment status, union status, parental presence or church attendance (Table 9.18).

Table 9.18: Percentage (%) of Youth with Given Background Characteristics Who Have Protective Factors, Jamaica, 2006

Protective Factors	**Employed**		**In a Union**		**Parental Presence**		**Church Attendance**		
	Yes	No	Yes	No	Yes	No	Never	Sometimes	Often
In Home Caring relationships	38.8**	54.3	45.1	53.3	54.6*	46.9	54.1***	47.0	62.7
High Expectations	60.6***	85.7	61.3*	85.5	86.8**	70.7	77.9***	84.6	91.7
Outside Home Caring relationships	65.7	71.1	69.6	70.4	70.6	70.2	69.4	69.8	75.2
High Expectations	75.1	81.0	76.1	80.5	80.8	79.0	78.5	80.7	85.6
Someone to trust	67.0	75.1	72.5	74.4	74.1	75.6	71.8	74.6	77.8

*p<0.05; ** p<0.01; *** p<0.001

9.2 Conclusions

Resiliency factors which provide protection for youth consisted mainly of caring relationships, high expectations and someone to trust. The majority of Jamaican youth reported having resiliency factors both inside and outside their homes but up to a third of them do not have these factors. There was an imbalance between modest levels of caring relationships as against high levels of expectations in Jamaican homes. Resiliency factors were associated with parental presence in homes.

More than a quarter of Jamaican youth reported experiencing unkind treatment, at least sometimes, from an adult outside their home and up to a half experienced negative experiences in their communities. Resiliency factors protected adolescents from engaging in risky behaviour including sexual activity and pregnancy and ganja use.

9.3 Recommendations

Parents need guidance in balancing their expectations of children with a caring attitude. The role of the community is important in the rearing of children and therefore policies and structures need to be put in place to achieve this objective. Efforts should be made to improve community awareness and knowledge of the issues affecting adolescents and to identify the role that communities can play in enhancing their development.

As far as possible, children should be reared by caring parents. Oftentimes the prevailing unsatisfactory situation is driven by factors outside of the control of policy makers or the community. The response of the community, including policy makers, may be to ensure that there are means with which parents and caretakers in the existing homes can be provided with the knowledge and skills they need to create that positive environment for youth.

CHAPTER 10

VIOLENCE, INJURIES AND MISDEMEANORS

The study investigated youth involvement in violence both as victims and perpetrators and with respect to occurrences both in the home and in the wider community. One-fifth of youth reported involvement in violence during the past 12 months, with males reporting a higher frequency than females. Both girls and boys reported lower frequencies of involvement in violence in older compared to younger ages, with declines from 25.9% to 19.2% and 19.6% to 12.3% from age 15 to 19 years among males and females respectively (Table 10.1). The study defined physical abuse as acts which resulted in welts, bruising**;** bleeding, broken bones or scars on the affected person and serious injury as one which results in the victim missing usual activities for at least one day and requiring attention form a doctor or nurse.

Table 10.1: Percentages of 15-19 Year Olds Involved in Violence by Age and Sex, Jamaica, 2006

Sex	15	16	17	18	19	Total
Male	25.9	24.5	20.8	18.9	19.2	22.6
Female	19.6	17.4	18.4	15.2	12.3	17.4
Both	22.6	21.0	17.0	16.0	16.0	20.0
N	380	315	277	204	140	1316

The study also enquired about involvement in or exposure to violent activities in the twelve months preceding the survey (Table 10.2). Significantly more females had been physically abused than males (14.9%vs.9.9%) but a larger proportion of males were; victims of attack, were perpetrators of attacks; were threatened; or saw a dead body. Males were three times more likely than females to carry a weapon. A large proportion of youth had seen a dead body in circumstances other than at a funeral (65.1%, males; 52.8%, females) and one in five boys carried weapons and were victims of attacks. Just fewer than 10.0% of youth reported having sustained a serious injury as defined above and males were almost twice as frequently affected as females.

Table 10.2: Percentages of Jamaican 15-19 Year Olds Who Experienced Given Violent Acts, Jamaica, 2006

Violent Act	Male	Female	Total
Physical Abuse*	9.9	14.9	12.4
Victim of attack*	19.4	15.1	17.2
Perpetrator of attack*	8.0	5.6	6.8
Teased or bullied	16.7	18.9	17.8
Threatened*	11.1	7.2	9.2
Carried a weapon***	21.5	7.2	14.4
Member of a gang	7.1	5.7	6.4
Stabbed or shot	5.1	3.7	4.4
Seen a dead body***	65.1	52.8	59.0
Reported serious injuries	12.1	6.5	9.3
N	597	719	1316

*p<0.05 ; ** p<0.01 ; *** p<0.001

The percentage of adolescents who reported being the victim of an attack appeared to decrease in frequency with age among youth age 15-19 years old while being a perpetrator appeared low at the extremes of the age range and was most frequent in the mid-years. The propensity of being teased or bullied decreased among older youth while reports of being threatened showed a less striking tendency to increase across the age band. There was a steep increase in the reports of weapon-carrying and a less steep increase in having seen a dead body as youth aged, but there seemed to be little or no age variation in gang-membership, reporting serious injuries or being stabbed or shot (Table 10.3).

Table 10.3: Age-Specific Percentages of Jamaican 15-19 Year Olds Who Experienced Given Violent Acts, Jamaica, 2006

Violent Act	15	16	17	18	19	Total
Physical Abuse	11.8	10.2	11.5	17.3	13.7	12.4
Victim of attack	20.1	17.7	15.9	15.0	14.4	17.2
Perpetrator of attack	8.8	6.6	10.8	7.8	3.4	8.0
Teased or bullied	21.2	18.1	15.7	15.9	14.8	17.8
Threatened	6.2	8.8	11.6	10.1	11.8	9.2
Carry a weapon	7.8	11.6	17.9	20.2	22.8	14.4
Member of a gang	5.1	9.2	7.6	4.8	3.8	6.4
Stabbed or shot	5.0	4.3	3.8	6.2	4.3	4.7
Seen a dead body	54.1	60.9	58.8	60.0	66.6	60.0
Reported Serious Injuries	10.3	9.4	7.3	13.3	5.8	9.3
N	380	315	277	204	140	1316

Of the 17.2 percent of teenagers who reported being victims of abuse, males more frequently than females reported having six or more episodes in the past 12 months (10.0% vs. 7.0% respectively). There was little sex difference in reports of a single episode or 2-5 episodes of victimization. Almost 50.0% of females reported being the perpetrator of abuse only once, compared to 40.0% of males, while reports of 2-5 episodes were 49.0% and 42.0% for males and females respectively. Reports of six or more episodes were made by 11.0% of boys compared to 8.0% of girls (Table 10.4).

Table 10.4: Among Those Experiencing Abuse, Distribution (%) of The Number of Times Adolescents 15-19 Years Were Victims or Perpetrators of Abuse, Jamaica, 2006

	Males	Females	Total
Number of times victim			
1	48.0	46.7	47.4
2-5	42.0	46.0	43.8
6-9	5.2	0.8	3.3
≥10	4.9	6.4	5.6
N	114	109	223
Number of times perpetrator			
1	39.8	49.7	43.8
2-5	49.1	42.2	46.3
6-9	6.8	5.4	6.2
≥10	4.3	2.7	3.7
N	44	40	84

Table 10.5 shows the percentage of adolescents who experienced violence in the past year by type of perpetrator. The abuser of 15-19 year olds most frequently named was an adult who lived in the household (44.1%), followed by an adult outside of the home (33.3%). There were very small sex differences, though females reported higher proportions for adults in the home (45.9% vs. 40.7%) while males reported higher proportions of sibling or other teenager in the home (11.9% vs. 6.4%).

Table 10.5: Percentages Stating Given Perpetrator of Abuse When 15-19 Year Olds Were The Victims, Jamaica, 2006

Abuser	Males	Females	Total
Adult in home	40.7	45.9	44.1
Adult outside home	32.2	33.9	33.3
Sibling or other teenager in home*	11.9	6.4	8.3
Boy/Girlfriend or teenager outside home	11.9	13.8	13.1
N	59	109	168

* $p < 0.05$

Of the 15-19 year olds who have seen a dead body apart from at a funeral, the most frequent cause of death were violent acts and both males and females appear to be similarly exposed with deaths due to shooting (64.6%, M; 55.5%, F) and stabbing (29.0%, M; 23.3%, F) (Table 10.6).

Table 10.6: Sex-Specific Percentages of Youth Reporting The Respective Causes Of Death For The Dead Bodies They Had Seen, Jamaica, 2006

Cause of Death	Male	Female	Total
Sick and died	22.9	29.6	25.9
Motor Vehicle accident	25.4	21.8	23.8
Beaten to death	5.8	3.1	4.6
Stabbed and killed	29.0	23.3	26.4
Shot and killed	64.6	55.5	60.5
Other cause of death	7.9	8.1	8.0

Approximately 9.3% of teenagers reported serious injuries in the past year (Table 10.2) of which almost 12.5% report being stabbed or shot in their lifetime. Table 10.7 shows that nearly 90.0% of youth who were stabbed or shot in their lifetime suffered this fate only once but this varied by sex. While only 4.0% of females reported more than one episode, 19.4% of males reported multiple episodes with almost 10.0% of males reporting three or more episodes compared to 4.0% of females (Table 10.7). Of the youth who reported suffering serious injury during the last year, most of them (81.7%) indicated suffering injury only once for the year.

Table 10.7: Among 15-19 Year Olds Thus Affected, Distributions (%) of The Frequency of Serious Injuries in The Last 12 Months and of Being Stabbed/Shot, Jamaica, 2006

	Males	Females	Total
Number of times stabbed/shot			
Once	80.7	96.0	87.5
Twice	9.7	0.0	5.4
Three or more	9.7	4.0	7.1
N	31	25	56
Number of times seriously injured			
1	76.7	89.4	81.7
2-5	23.3	4.3	15.8
4-7	0.0	4.3	1.7
≥10	0.0	2.1	0.8
N	73	47	120

Table 10.8 outlines the categories into which injuries suffered by Jamaican youth fall. Most of these injuries occurred whilst involved in sporting activities with twice as many males as females suffering from sports injuries. These results relate to the findings that significantly more males are

involved in physical activity than females. On the other hand twice as many females as males were injured while doing chores ($p<0.05$). Injuries sustained by 15-19 year olds were most frequently due to falls (22.2%) which affected males and females equally. Major sex disparities in causes of injury include being attacked (19.6%, F; 8.5%, M), motor vehicle accident (13.0%, F; 5.6%, M), being hit by an object (10.9%, F; 18.3%, M) and other unspecified causes (26.1%, F; 36.6%, M). Accidentally self inflicted injuries were the most frequently reported type and accounted for 50-60% of the reported injuries. This was followed by accidentally inflicted injuries which were much more frequent among the males (33.8%) compared to females (19.2%). A large proportion of persons (25.8%) reported injuries of an unspecified type and these were more frequently reported by males. Broken bones and cuts/stab wounds were the more prevalent types of injuries reported and showed opposite sex preponderance, broken bones being more frequent among males and cut/stab wounds more prevalent among females (Table 10.8).

Table 10.8: Distributions (%) of The Activities Leading to, Major Causes of and Types of Serious Injury Sustained by 15-19 Year Olds, Jamaica, 2006

Characteristic	Males	Females	Total
Cause of Injury			
Attacked	8.5	19.6	12.8
Involved in a fight	5.6	4.4	5.1
Fire/Burns	2.8	4.4	3.4
Motor Vehicle Accident	5.6	13.0	8.6
A Fall	22.5	21.7	22.2
Hit by something	18.3	10.9	15.4
other	36.6	26.1	32.5
Classification of cause			
Purposefully inflicted	12.7	19.2	15.3
Accidentally Inflicted	33.8	19.2	28.0
Accidentally Self inflicted	52.1	59.6	55.1
Type of Injury			
Concussion/Head Injury	12.3	4.3	9.2
Cut/Stab Wound	19.2	44.7	29.2
Burns	2.7	6.4	4.2
Broken Bones	35.6	25.5	31.7
Other	30.1	19.2	25.8
Activity			
Sporting activity	50.7	25.5	40.8
Walking /Running	5.5	19.2	10.8
Cycling	6.9	6.4	6.7
Driving or in a motor vehicle	6.8	10.6	8.3
Doing chores	12.3	23.4	16.7
Nothing	4.1	0.0	2.5
Other	13.7	14.9	14.2
Total	100.0	100.0	100.0
N	73	47	120

Of the 9.2% of teens 15-19 years (11.1%M and 7.2%F, $p<0.05$; Table 10.2) that have ever been threatened so that they were afraid to leave their homes, the source of threats is shown in Table 10.9. Threats occurred most frequently in their neighbourhood or at school.

Table 10.9: Frequency (%) of The Occurrence of Threats to Jamaican 15-19 Years Olds in Different Circumstances, Jamaica, 2006

Place threat occurred	Males	Females	Total
School	33.9	24.5	29.2
Neighbourhood	40.0	66.0	51.7
At a store	0.00	1.9	0.8
Public Area with other children	21.5	9.4	16.1
Other	9.2	1.9	5.6
N	65	53	118

Jamaican youth report that 14.4% of them carried weapons with marked sex difference (21.5%, M; 7.2%, F). The most popular choice of weapon was a sharp instrument such as a knife, ice-pick or scissors and 3.3% of male youth reported carrying a handgun (Table 10.10).

Table 10.10: Distribution (%) of Types of Weapons Carried by Jamaican 15-19 Year Olds Who Carry Weapons, Jamaica, 2006

Types of weapons carried	Males	Females	Total
Handgun	3.3	0.0	2.4
Other type of gun	0.0	2.0	0.6
Sharp instrument	91.7	86.0	90.0
Blunt instrument	5.0	10.0	6.5
Other type of weapon	0.0	2.0	0.6
Total	100.0	100.0	100.0
N	120	50	170

More than 20.0% of youth reported that they cheated on tests, 19.0% reported committing malicious damage, 10.1% carried out armed attacks, between 2-4.0% were guilty of stealing from stores or someone, and about 3.0% ran away from home at least once.(Table 10.11)

Table 10.11: Distribution (%) of Frequency with Which Jamaican 15-19 Year Olds Carried Out Certain Misdemeanours, Jamaica, 2006

Misdemeanour	Males	Females	Total
Cheated on a test			
1-2 times	19.4	15.1	17.3
>3 times	5.9	4.3	5.1
Malicious Damage			
1-2 times	16.5	12.5	14.5
> 3 times	4.2	4.7	4.4
Armed attacks			
1-2 times	10.4	5.7	8.1
> 3 times	2.6	1.4	2.0
Stole from a store			
1-2 times	2.3	1.6	2.0
> 3 times	0.5	0.4	0.5
Stole from someone			
1-2 times	4.4	4.1	4.3
> 3 times	1.8	1.1	1.4
Intent to steal			
1-2 times	0.8	0.3	0.5
>3 times	1.1	0.0	0.5
Ran away from home			
1-2 times	1.6	2.5	2.1
> 3 times	1.0	0.7	0.8
N	596	719	1315

Less than 7.0% of 15-19 year olds reported ever being in a gang (Table 10.12) with 2.0%, and more males than females, indicating that they were current members.

Table 10.12: Percentage of Jamaican Youth Age 15-19 Who Reported Being in a Gang, Jamaica, 2006

Gang Member Status	Males	Females	Total
Never	92.9	94.3	93.6
Past member	4.3	4.7	4.5
Current member	2.8	1.1	1.9

Table 10.13 shows the proportions of youth who reported involvement in violent activities in the various categories of background social characteristics. Socio-economic status and youth union status do not appear to influence involvement in violent activities. The presence of both parents in the home compared to a single parent of either sex appears to reduce the proportion of youth who report involvement in violence (20.0% to 14.0%) but this appears to be a reduction among males only as the estimate among females actually increases. Higher levels of educational achievement appear to be associated with less involvement in violence, falling from 40.0% to 20.0% and 10.0% for primary or lower, secondary and post-secondary levels respectively. This reduction is consistent across both sexes but is more marked among males, falling from 52.0% to 6.0% across the spectrum of educational achievement. Affiliation with the Christian religion, relative to having

no religion, was associated with a small reduction in violence involvement but this was due to a fall among males.

Table 10.13: Proportion (%) of Youth with Given Background Characteristics Who Report Involvement in Violence, Jamaica, 2006

Background Characteristics	Male	Female	Total
Socioeconomic Status			
Low	23.1	18.7	20.8
Middle	22.4	16.8	19.7
High	22.1	15.7	19.1
Parental Presence			
Biological mother	24.6	14.9	20.6
Biological father	23.4	18.0	20.5
Both biological parents	17.0	19.8	13.5
Education			
Primary or lower	51.9	25.3	40.2
Secondary	22.6	17.2	19.9
Post-secondary	5.8	14.4	10.4
Religion			
Christian	20.6	16.6	18.4
Other religion	24.9	21.8	23.7
No religion	25.2	16.3	22.3
Union Status [1]			
In union	25.6	17.2	20.1
Not in union	22.4	17.4	20.0
Males and Females	21.3	.17.0	19.2
N	597	719	1316

[1]In a visiting , married or common-law relationship

According to Table 10.14, the constant or nearly constant presence of a caring adult or an adult with high expectations in the teenager's home did not always protect the adolescent from being a victim of a physical fight or attack. Except for two domains – an adult who had time to pay much attention to the teen and an adult who often or always wants the teen to do his/her best – the tabulated data showed no significant differences in physical violence victimization rates by type of protective factor. A significantly ($P<0.01$) larger percentage of females and all 15-19 year-olds ($\approx$22.0% vs. < 15.0%) were victims of a physical attack or fight if they sometimes, rarely or never had an adult in the home who had time to pay attention to them. The percentage of violence victims was also higher (25.3% vs. 14.2%) among females who infrequently had in their homes an adult who often or always wanted their best effort. When home-based protective factor groups are compared, the absence of statistical significance with respect to being a violence victim – particularly among the males - may be indicative of the Jamaican teen's ability to resist violent attacks regardless of the protective factor group to which she/he belongs.

Table 10.14: Percentage of Adolescents Aged 15-19 Who Were Victims of a Physical Attack or Fight by Sex and Protective Factors in The Home, Jamaica, 2006

PRESENCE IN HOME OF ADULT WHO:	Males	Females	Total
Expects you to follow the rules			
Sometimes, rarely or never	16.4	14.5	15.5
Always or often	19.8	15.3	17.6
Believes you will be a success			
Sometimes, rarely or never	19.6	24.2	21.8
Always or often	19.4	13.7	16.6
Has time to pay much attention to you			
Sometimes, rarely or never	21.6	21.9***	21.8**
Always or often	17.7	11.8	14.8
Talks with you about problems			
Sometimes, rarely or never	16.6	17.4	17.0
Always or often	21.5	13.9	17.8
Always or often wants you to do your best			
Sometimes, rarely or never	17.1	25.3*	20.7
Always or often	19.3	14.2	16.8
Listens when you have something to say			
Sometimes, rarely or never	14.1	18.6	16.6
Always or often	20.4	14.0	17.3

*** p< .001 ** p< .01 * p < .05

Table 10.15 shows that female Jamaican teenagers (15-19 years old) who always or nearly always had access to an adult who was outside the home and really cared about them reported lower levels of victimization resulting from violence (14.9% vs. 17.6%). The difference between the percentage for the "protected" females – by virtue of having access to an adult that really cared about her – and that for the "unprotected" is not statistically significant. Data in Table 10.15 suggest that the absence of the other protective factors yielded lower percentages of reported victimization due to violence. Contrary to expectations, youth who had in their lives an adult outside the home who almost always believed the teen would be a success, noticed when the teen was upset, and was trusted by the teen, reported significantly higher levels of violence perpetration ($P<0.05$). The statistical significance of these differences was driven by the difference between "protected" (21.0% being victims) and "unprotected" (11.6% being victims) males with respect to having an adult who believed the teen would be a success; and between "protected" (17.0% being victims) and "unprotected" (9.8% being victims) females with respect to having an adult that the teen trusted.

Table 10.15: Percentage of Adolescents Aged 15-19 Who Were Victims of a Physical Attack or Fight by Sex and Protective Factors outside The Home, Jamaica, 2006

PRESENCE OUTSIDE HOME OF ADULT WHO:	Males	Females	Total
Really cares about you			
Sometimes, rarely or never	18.8	17.6	18.2
Always or often	19.7	14.9	17.3
Tells you when you do a good job			
Sometimes, rarely or never	16.1	15.1	15.6
Always or often	20.6	15.3	17.9
Notices when you are not there			
Sometimes, rarely or never	17.6	14.0	16.0
Always or often	20.7	15.8	18.2
Always wants you to do your best			
Sometimes, rarely or never	18.2	18.7	14.7
Always or often	19.9	16.1	18.0
Listens when you have something to say			
Sometimes, rarely or never	18.5	13.0	16.0
Always or often	19.8	16.1	18.0
Believes you will be a success			
Sometimes, rarely or never	11.6*	11.5	11.6*
Always or often	21.0	16.0	18.5
Notices when you are upset about something			
Sometimes, rarely or never	17.3	12.9	15.4*
Always or often	20.6	16.2	18.3
Who you trust			
Sometimes, rarely or never	16.5	9.8*	13.1*
Always or often	20.1	17.0	18.6

*** p< .001 ** p< .01 * p < .05

The 15-19 year-olds were classified as having home-based protective factors if they had in their homes always or nearly so, an adult who has high expectations of the teen or an adult who shows care for the teen. The percentages given in Table 10.16 suggest that, compared with persons without the respective protective factors, fewer Jamaican 15-19 year-olds who were categorised as having home-based protective factors reported causing a fight or physical attack. The tabulated data give evidence that females with protective factors, namely, at least an almost constant presence of an adult in the home who believes they would be a success, talked to them about their problems, always or often wanted the teen's best effort, or gave a listening ear, were less likely (than their "unprotected" female counterparts) to cause a physical attack or fight. Significantly fewer females (4.4% vs. 13.6%; 4.1% vs. 8.1%; 5.2% vs. 11.5%, and 4.4% vs. 9.4%), with the respective factors present in their lives, reported being the cause of a physical attack or fight. In males, the protective effect was statistically significant only for the presence of an adult who talked with the teen about his problems.

Table 10.16: Percentage of Adolescents Aged 15-19 Who Caused a Physical Attack or Fight by Sex and Protective Factors in The Home, Jamaica, 2006

PRESENCE IN HOME OF ADULT WHO:	Males	Females	Total
Expects you to follow the rules			
Sometimes, rarely or never	8.6	5.6	7.1
Always or often	7.5	5.7	6.6
Believes you will be a success			
Sometimes, rarely or never	6.9	13.6**	10.0
Always or often	8.0	4.4	6.2
Has time to pay much attention to you			
Sometimes, rarely or never	9.4	7.4	8.5
Always or often	7.2	4.7	6.0
Talks with you about problems			
Sometimes, rarely or never	11.3*	8.1*	9.6*
Always or often	6.1	4.1	5.1
Always or often wants you to do your best			
Sometimes, rarely or never	14.1	11.5*	12.9*
Always or often	7.5	5.2	6.4
Listens when you have something to say			
Sometimes, rarely or never	8.7	9.4*	9.1
Always or often	7.9	4.4	6.2

*** p< .001 ** p< .01 * p < .05

Compared with those teens who did not have the respective protective factors, Jamaican 15-19 year-olds who almost always had access to an adult outside the home who told them when they did a good job, noticed their absence, believed they would be a success, noticed when they were upset about something, or was trusted by the teens were less likely to report being the cause of a physical attack or fight. (Table 10.17). However, the lower percentage of perpetrators of violence among the teens protected by acknowledgement of good job performance was evidenced and statistically significant among females (4.1% vs. 10.8%) but not among males. Of the other factors originating outside the home, the only statistically significant protective effect was that of having an adult who noticed the teen's absence (at least almost always) both for males (6.3% vs. 12.4%) and females (4.4%vs.9.4%).

Table 10.17: Percentage of Adolescents Aged 15-19 Who Caused a Physical Attack or Fight by Sex and Protective Factors Outside The Home, Jamaica, 2006

PRESENCE OUTSIDE HOME OF ADULT WHO:	Males	Females	Males and Females
Really cares about you			
Sometimes, rarely or never	7.0	6.4	6.7
Always or often	8.5	6.4	6.9
Tells you when you do a good job			
Sometimes, rarely or never	7.4	10.8**	9.0
Always or often	8.2	4.1	6.1
Notices when you are not there			
Sometimes, rarely or never	12.4*	9.4*	11.1***
Always or often	6.3	4.4	5.3
Always wants you to do your best			
Sometimes, rarely or never	6.1	3.8	5.0
Always or often	8.3	5.9	7.1
Listens when you have something to say			
Sometimes, rarely or never	8.0	5.5	6.9
Always or often	8.0	5.8	6.9
Believes you will be a success			
Sometimes, rarely or never	8.8	5.9	7.5
Always or often	8.1	5.7	6.9
Notices when you are upset about something			
Sometimes, rarely or never	9.5	6.8	8.3
Always or often	7.6	5.2	6.3
Who you trust			
Sometimes, rarely or never	10.1	5.3	7.7
Always or often	7.4	5.8	6.6

*** p< .001 ** p< .01 * p < .05

10.1 Conclusion

One-fifth of youth were involved in violence and this was more prevalent among younger adolescents and among males. More than a fifth of 19 year olds carried weapons and a similar proportion had been bullied or teased. Youth faced threats in various circumstances including at schools and in their neighbourhoods. Lower levels of educational attainment were associated with increased levels of involvement in violence but there was no association with socio-economic status as estimated by household possessions.

The constant or nearly constant presence in the teen's life of an adult who showed they cared, had high expectations of, or was trusted by the teen appeared to be protective against instigation of violence by the youth. The mere presence of parents in the home was not protective from involvement in violence but parents must show an interest in the youths' whereabouts and the problems they might be facing.

10.2 Recommendations

Achieving higher levels of education must be made a priority and schools and neighbourhoods need to have sustained peace initiatives. Youth should be encouraged to identify and interact with adult role models who can have a positive influence on them.

Parents and other adults who care for children need to improve parenting skills which should be aimed at avoiding the use of violence. Programmes to improve these skills are required.

There is also a need to develop programmes and structures to provide the youth with alternate activities for both in-school and out of school youth. Sports and other social engagements including family life and home-making activities could be part of the focus.

CHAPTER 11

SUBSTANCE USE AND ABUSE

The study examined the use of alcohol, tobacco and ganja (marijuana) by Jamaican 15-19 year old youth. Almost 50% of youth reported alcohol use sometime in the past and while the point estimate is greater among males, the difference is not statistically significant. Of those who drank alcohol, the percentage of males who reported drunkenness was greater than among females (10.4% vs. 5.8%; p<0.0001). Ganja smoking in the past year was reported more frequently than cigarette smoking at 10.5% versus 5.1% (15.9% vs. 7.3% among males and 5.0% vs. 3.0% among females, respectively). Ganja and cigarette smoking were both significantly more prevalent among male youth compared to their female counterparts (Table 11.1).

Table 11.1: Percentage of 15-19 Year Olds Who Used Alcohol, Tobacco or Ganja, Jamaica, 2006

Risk Behaviour	Males	Females	Total
Alcohol Use	56.1	41.6	48.9
Drunkenness***	10.4	5.8	8.1
Ganja Smoking***	15.9	5.0	10.5
Cigarette Smoking **	7.3	3.0	5.1

** p<0.01; *** p<0.001

The proportion of youth who used illicit substances or became drunk in the past year increased with age. Across the five year band there is more than a three-fold increase in ganja and cigarette use (5.3 % -18.1% and 2.8- 11.0%) respectively while alcohol use increased by approximately 25% and drunkenness doubled (Table 11.2).

Table 11.2: Percentages of Respective Ages with Given Risk Behaviours, Jamaica, 2006

Risk Behaviour	Age 15	Age 16	Age 17	Age 18	Age 19
Alcohol Use	41.1	46.8	52.8	57.6	53.5
Drunkenness	5.4	9.2	8.4	10.1	10.8
Ganja Smoking***	5.3	6.3	13.6	16.0	17.9
Cigarette Smoking ***	2.8	3.3	5.6	7.3	11.0

** * p<0.001

11.1 Alcohol Consumption

Alcohol preference varied by sex (Table 11.3). While a third of youth of both sexes preferred wine, male youth had a higher preference for brewed alcoholic drinks ($p<0.001$) compared to females (84.6% vs. 52.2%) and more females preferred premixed alcoholic drinks and coolers (72.0% vs. 44.9%)($p<0.001$).

Table 11.3: Of Jamaican 15-19 Year Olds Who Drank, Percentages Who Prefer Given Alcoholic Beverages, Jamaica, 2006

Alcoholic Beverage	Male	Female	Total
Premixed alcoholic coolers***	44.9	72.0	56.5
Beer or stout***	84.6	52.2	70.8
Wine[ns]	32.6	32.9	32.8
Liquor[ns]	35.1	29.2	32.6
N	329	299	628

*** - $P < 0.001$, [ns] – $P \geq 0.05$ Note: Data pertain to adolescents who consumed alcohol in the past 12 months

Table 11.4 highlights the usage pattern of various alcoholic beverages among 15-19 year old youth. For most types of alcohol, about 10.0% youth reported a frequency of once or more times per week. The notable exception is with the consumption of beer or stout where 21.4% reported this frequency and this was mainly due to the consumption by male youth. Among those who reported drinking beer or stout (16.6%) significantly more males drank beer or stout 1-2 times per week than their female counterparts. A further 6.6% of males also reported having beer or stout more than four times per week.

Table 11.4: Percentages of Youth with Given Frequencies of Alcohol Use during The Past Year, Jamaica, 2006

Frequency of use	Male	Female	Total
Premixed Alcohol			
< 1 times in last year	17.1	36.6	25.3
1-3 times per month	14.6	25.6	19.2
1-2 times per week	11.5	7.1	9.6
> 4 times per week	1.8	3.2	2.4
Beer or stout			
< 1 times in last year	26.3	22.0	24.5
1-3 times per month	30.2	21.4	26.6
1-2 times per week	23.1	7.7	16.6
> 4 times per week	6.6	2.3	4.8
Wine			
< 1 times in last year	12.7	14.6	13.5
1-3 times per month	10.1	12.0	10.9
1-2 times per week	8.0	3.8	6.3
> 4 times per week	1.9	1.6	1.8
Spirits			
< 1 times in last year	12.4	12.8	12.5
1-3 times per month	11.9	10.5	11.3
1-2 times per week	8.9	2.5	6.2
> 4 times per week	1.6	2.0	1.8
Any other Alcoholic Beverages			
< 1 times in last year	4.2	2.9	3.7
1-3 times per month	8.0	5.7	7.0
1-2 times per week	5.4	3.0	4.4
> 4 times per week	0.9	2.2	1.5
N	328	294	622

Note: Data pertain to adolescents who consumed alcohol in the past 12 months

Table 11.5 shows that similar proportions of males and females drank more than five alcoholic drinks in one day. This so-called "binge drinking" is reported by 10.0% or less of youth except in the case of beer and stout where this proportion was approximately 20.0%.

Table 11.5: Percentages of Youth with Given Frequencies of Drinking Five or More Alcoholic Drinks in One Day, Jamaica, 2006

Frequency	Male	Female	Total
Premixed Alcohol			
< 1 times in last year	4.8	5.8	5.2
1-3 times per month	2.5	3.9	3.1
1-2 times per week	1.9	1.5	1.7
> 4 times per week	0.7	0.8	0.7
Beer or stout			
< 1 times in last year	12.1	5.9	9.5
1-3 times per month	8.7	3.9	6.7
1-2 times per week	4.3	0.9	2.9
> 4 times per week	2.2	0.7	1.6
Wine			
< 1 times in last year	4.2	3.8	5.9
1-3 times per month	1.6	1.0	3.9
1-2 times per week	0.3	1.8	0.9
> 4 times per week	0.4	0.4	0.4
Spirits			
< 1 times in last year	3.2	3.2	3.2
1-3 times per month	2.6	2.0	2.4
1-2 times per week	2.8	0.4	1.8
> 4 times per week	0.3	0	0.2
Any other Alcoholic Beverages			
< 1 times in last year	0.7	2.1	1.3
1-3 times per month	1.3	0.5	1.0
1-2 times per week	2.4	0.4	1.6
> 4 times per week	0.3	0.7	0.5
N	322	294	616

Note: Data pertain to adolescents who consumed alcohol in the past 12 months

The average number of drinks usually consumed by 15-19 year olds increased steadily with age (Table 11.6). Males reported consuming more alcoholic drinks than females both on average (2.9 vs. 2.2) and in maximum (4.4 vs. 3.0) in the last year; and had higher tolerance levels (5.2 vs. 3.2) i.e. the number of drinks consumed before becoming drunk. While males consumed more alcohol at all ages, the difference between sexes was not the same at all ages. For example as, compared with 17 year-old males, 17 year-old females consumed significantly less ($P<0.05$) alcohol on the days they usually drank. In other words, the data suggests that the sex differences are significant across age groups but not at each year of age. There was no statistically significant interaction between age and sex for largest number of drinks consumed within a single day and for the largest number of drinks that the teen can consume without intoxication.

Table 11.6: Means for Alcohol Consumption (Number of Drinks) in Past Year by Jamaican Adolescents, Jamaica, 2006

		Age (Years)					
Usual number of drinks in past year	**Sex**	**15**	**16**	**17**	**18**	**19**	**Total**
	Male	2.1	2.6	2.6	3.3	3.4	2.9
	Female	1.9	1.8	1.8	2.6	2.6	2.2
	Total	2.0	2.2	2.3	3.0	3.1	2.3
Largest number of drinks in a single day	Male	3.2	3.8	3.5	5.4	5.8	4.4
	Female	2.7	2.4	2.9	3.5	3.3	3.0
	Total	3.0	3.2	3.2	4.6	4.8	3.8
Alcohol tolerance*	Male	5.0	4.5	4.4	5.5	6.1	5.2
	Female	3.4	2.6	3.4	3.7	3.0	3.2
	Total	4.3	3.7	4.0	4.8	4.8	4.4

*Alcohol tolerance = number of drinks consumed before becoming drunk

Male 15-19 year olds reported drinking more alcohol than their female counterparts. Approximately 12.8% of males reported that the usual number of drinks they consumed was more than five on any given occasion whereas only 6.7% of females reported the same (Table 11.7). Twice as many boys as girls reported that the largest number of drinks they consumed in the past year was more than five (30.3% vs.15.1%). The mean number of drinks consumed by teenagers on a usual occasion was 2.3 drinks. While similar proportions of males and females reported the consumption of one drink in the past year (approximately two-thirds of youth), a larger proportion of boys reported lifetime drinking and consuming twelve drinks in the past year. Among youth who reported alcohol consumption, larger proportions of male youth started alcohol consumption at younger ages than females. By age 11 years 22.6% of boys have had their first drink compared to 7.6% of girls and by age 15 years approximately 84.0% of boys and 69.0% of girls have had an alcoholic drink (Table 11.7).

Table 11.7: Percentage of Youth with Given Drinking Habits and Ages of Initiation of Jamaican 15-19 Year Olds, Jamaica, 2006

Drinking Habits	Male	Female	Total
Usually having >5 drinks*	12.8	6.7	10.2
>5 drinks as the largest number of drinks consumed***	30.3	15.1	23.9
Ever drank in lifetime***	67.1	55.3	61.2
12 drinks in past year***	48.2	34.6	42.1
1 drink in past year	67.6	62.5	65.1
Age of first drink*			
≤7yrs	4.6	1.5	3.2
8-9 yrs	4.7	1.3	3.2
10-11 yrs	13.3	4.8	9.4
12-13 yrs	20.6	21.2	24.2
14-15 yrs	34.6	40.0	37.0
≥16 yrs	16.3	31.3	23.8

*** - P < 0.001, * – P< 0.05 Note: Data pertain to adolescents who consumed alcohol in the past 12 months

The majority of youth who have had at least one or more drink in the past year reported that they did not get into trouble because of drinking. Getting into trouble and feeling sick were the most frequent adverse consequences of alcohol consumption among youth occurring in approximately 20.0% of youth (Table 11.8). Few youth reported that they got into trouble with family or friends, missed school, or got into a fight because of drinking alcohol.

Table 11.8: Consequences (Expressed as Percentages) of Alcohol Use as Reported by Jamaican 15-19 Year Olds, Jamaica, 2006

Number of times teenager:	Male	Female	Total
Got in trouble			
0	79.5	83.1	81.0
1-2	16.6	14.7	15.8
3-9	3.6	1.1	2.6
≥10	0.3	1.0	0.6
Felt sick after drinking			
0	83.7	79.5	81.9
1-2	13.7	17.7	15.4
3-9	2.0	2.2	2.1
≥10	0.7	0.6	0.6
Got in trouble with family as a result of drinking			
0	95.7	94.6	95.2
1-2	4.0	4.7	4.3
3-9	0.3	0.7	0.5
Got in trouble with friends as a result of drinking			
0	97.7	98.2	97.9
1-2	2.3	1.8	2.1
Missed school as a result of drinking			
0	99.4	100	99.6
1-2	0.6	0	0.4
Got into a fight as a result of drinking			
0	98.4	99.7	98.9
1-2	1.3	0.3	0.9
3-9	0.3	0	0.2
Totals	100.0	100.0	100.0
N	328	297	625

Of the 8.1% of 15-19 year olds who reported drinking enough to feel intoxicated or drunk, 3.0% of them said this occurred more than sixteen times per month and 4.0% of them reported operating a car or other motor vehicle at this said frequency (i.e., > 16 times per month). (Table 11.9).

Table 11.9: Proportion of Jamaican Adolescents Involved in Drunkenness and Drunk Driving with Given Frequencies in Last 12 Months, Jamaica, 2006

Number of times per month	Male	Female	Total
Drunkenness occurred			
Never	79.7	88.1	83.2
4-8	13.6	2.4	8.9
12-16	3.4	7.1	5.0
> 16	3.4	2.4	3.0
Drunk Driving occurred			
Never	94.2	93.6	93.9
4-8	1.2	3.2	2.0
12-16	0	0.8	0.3
> 16	4.6	2.4	3.7

A little over half of the teenagers who drank reported having alcohol in the past month with a higher percentage of males reporting consumption (62.4% vs. 47.1%) and a third (of those who drank) reported having two drinks per day in the past month. A larger proportion of males than females had tolerance for 5 or more drinks of alcohol (Table 11.10). The vast majority of youth who consumed alcohol had at least one drink in the past month and about 70.0% report that they would usually have 1-2 drinks per day. Buying at a store or shop was the most common source from which they obtained alcohol (68.8%) and 19.6% report getting it from a friend. There appeared to be significant sex differences in the means of obtaining alcohol with more females citing their source as friends and males actually buying at store or shop. Approximately 6.0% of youth obtained alcohol from home and 4.0% reported stealing alcohol.

Table 11.10: History of Alcohol Consumption and Sources of Alcoholic Drinks(Expressed as Percentages) among 15-19 Year Old Adolescents, Jamaica, 2006

Alcohol consumption pattern in last month	Male	Female	Total
Alcohol tolerance/threshold of ≥ 5 drinks***	44.4	18.0	33.4
Drank alcohol***	62.4	47.1	55.9
Number of days drank ≥ 1 alcoholic drink			
1-5	81.0	89.2	83.9
6-9	10.6	6.5	9.1
10-19	6.0	2.1	4.6
≥ 20	2.4	2.3	2.3
Usual number of drink per day in past month			
1 or less	43.3	45.2	44.0
2	27.9	30.9	29.0
3	13.9	12.9	13.6
4	8.6	6.0	7.6
5 or more	6.4	5.0	5.9
Source of alcoholic drink in past month*			
Bought at store or shop	74.7	58.0	68.8
Gave money to someone to buy it	0.4	0.5	0.5
Got it from friends	14.1	29.5	19.6
Got it from home	5.8	6.1	5.9
Stole it	4.8	5.2	3.7
Got it some other way	2.1	0.8	1.6

** * p<0.001 * p<0.05

11.2 Cigarette Smoking

One fifth (22.3%) of the adolescents report that they had ever smoked and that same proportion reported that they had smoked in the past month (Table 11.11). Three quarters of adolescents reported smoking 1-5 cigarettes per day in the last month but 14.0% of smokers (18.2% F; 12.2% M) reported smoking more than 20 cigarettes per day. Almost 40.0% of youth had been exposed to second-hand smoke on a daily basis and almost 80.0% had been exposed for at least one day in the past week. Although only a small percentage had both parents who smoked (3.4%); in most cases when the smoker is a single parent/guardian it was the male parent/guardian not the female (79.6% vs. 17.0%). Approximately 22% (28.8% M; 16.1% F) of youth have tried to stop smoking in the last year

Table 11.11: Patterns (Expressed as Percentages) of Cigarette Smoking among Adolescents Aged 15-19 Years, Jamaica, 2006

Smoking History	Male	Female	Total
Ever smoked*	25.5	19.0	22.3
Number of days exposure to second hand smoke in past seven days			
0	22.7	32.2	27.5
1-2	16.5	16.2	16.4
3-4	12.1	8.6	10.4
5-6	7.7	4.9	6.3
7	41.0	38.1	39.5
Male parent/guardian smoke	86.9	74.2	79.6
Female parent/guardian smoke	11.7	21.0	17.0
Both parent/guardian smoke	1.5	4.8	3.4
Smoked in the past month	28.8	16.1	22.6
Number of days smoked cigarettes in past month			
1-5	78.1	72.7	76.2
6-9	4.9	4.6	4.8
10-19	4.9	4.6	4.8
≥20	12.2	18.2	14.3
Tried stopping smoking in past year	28.8	16.1	22.6

* $p < 0.05$ [1] Data pertain to adolescents who have ever smoked

Approximately 10.0% of youth who smoke reported that they started smoking before the age of ten and one-third reported starting later at ages 14-15 years (Table 11.12). There were no sex differences in the group.

Table 11.12: Percentages of Jamaican Youth Who Initiate Cigarette Smoking at Given Ages, Jamaica, 2006

Age group	Male	Female	Total
≤ 7	3.7	5.5	4.5
8-9	6.7	4.0	5.5
10-11	14.1	9.8	12.2
12-13	26.1	17.5	22.4
14-15	32.2	27.5	30.2
≥ 16	17.3	35.9	25.2
Total	100.0	100.0	100.0
N	141	133	274

11.3 Ganja Use

Of the teenagers who have ever used ganja in any form, significantly more males have tried than females (27.5% vs. 13.5%, p<0.001). The sex difference persists throughout the various types of ganja use; whether in use of ganja tea or smoking. Of those who have ever smoked ganja (18.9 %; 25.8%, M, 11.8%, F), 60.8% have smoked in the past year and more than half of the males are current users, i.e. they have smoked in the last 30 days (Table 11.13).

Table 11.13: History of Ganja Use among 15-19 Year Olds, Jamaica, 2006

Ganja Use	Males	Females	Total
Any form-Ever***	27.5	13.5	20.5
Ganja Tea-Ever**			
Current Use- ***Frequency in past 30 days***	8.1	3.5	5.8
Less than once per week	23.5	18.0	21.4
Once or twice per week	3.4	3.4	3.4
Three or four times per week	2.7	4.5	3.4
Five or more times per week	2.0	0.0	1.3
Smoked Ganja- Ever	25.8	11.8	18.9
Used in past year	68.4	47.4	60.8
Current Use- Past 30 days	53.2	21.8	41.9
Frequency in past 30 days			
Less than once per week	17.6	35.3	20.8
Once or twice per week	23.0	29.4	24.2
Three or four times per week	14.9	17.7	15.4
Five or more times per week	44.6	17.7	39.6

***p<0.001, **p<0.01

The adolescents reported initiation of ganja smoking as early as less than 7 years old. Of those who smoked, over 70.0% initiated ganja smoking by age 15 years with the proportion of males slightly higher than that for females (74.5% vs. 68.5%) (Table 11.14).
Jamaican 15-19 year olds reported experimentation (58.0%) and peer influence (31.5%) as the major reason for smoking ganja (Table 11.15). Peer influence was mainly among the males while significantly more females cited experimentation as their reason for smoking ganja. An important minority of 13.0% reported using ganja for health benefits and 3.0% attributed stressors as the reason for smoking ganja.

Table 11.14: Proportion (%) of Jamaican Youth Who Initiated Ganja Smoking at Given Ages, Jamaica, 2006

Age	Male	Females	Total
≤ 7 years	2.7	1.1	2.1
8-9 years	2.7	0.0	1.7
10-11 years	10.7	2.3	7.6
12-13 years	20.1	10.1	16.4
14-15 years	29.5	39.3	33.2
≥ 16 years	25.5	31.5	27.7
N	136	75	211

Table 11.15: Factors (Expressed as Percentages) Contributing to Ganja Use among Jamaican 15-19 Year Old Adolescents

Reason for starting to smoke ganja	Male	Female	Total
Peer Influence	35.6	24.7	31.5
Experimentation	52.4	67.4	58.0
Reputed Health Benefits	14.1	11.2	13.0
Stressors	3.4	3.4	3.4
N	136	75	211

11.4: Recreational Drug Use in Jamaica

Ganja, alcohol and cigarettes were the most easily accessible recreational drugs among the Jamaican adolescent population and significantly more males reported that these drugs were very easy to access than did their females counterparts. More than 5.0% of youth reported that it was very easy to access cocaine and crack, with more males reporting accordingly. Approximately 50.0% of adolescents reported that it is either very difficult or probably impossible to access Steroids and Amphetamines (Table 11.16).

Table 11.16: Ease of Access to Recreational Drugs among 15-19 Year Old Youth, Jamaica, 2006

Drug	Very Easy	Fairly Easy	Fairly difficult	Very difficult	Probably Impossible	Total
Ganja*						
M	75.5	7.9	4.4	10.4	1.9	100.0
F	66.2	9.3	6.3	15.3	2.8	
Cocaine						100.0
M	6.3	7.1	12.5	43.1	31.1	
F	6.5	4.0	11.9	43.7	34.0	
Crack*						100.0
M	5.2	6.4	10.9	45.4	32.0	
F	5.4	2.8	12.3	43.6	35.9	
Alcohol*						100.0
M	92.5	4.4	0.6	1.7	0.8	
F	87.7	5.9	1.3	4.6	0.6	
Cigarettes**						100.0
M	93.8	3.4	0.5	1.5	0.8	
F	88.7	4.7	0.9	4.6	1.1	
Steroids						100.0
M	2.5	2.7	7.6	45.9	41.3	
F	3.5	1.9	5.1	45.2	44.3	
Amphetamines						100.0
M	1.0	0.6	3.1	45.3	50.0	
F	1.2	1.3	2.6	41.4	53.5	

*** p< .001 ** p< .01 * p < .05

The majority of youth reported having none or a few friends who used ganja, cocaine/crack, cigarettes and other drugs (Table 11.17). Significantly more males (21.6%) than females (9.9%) reported that all their peers recreationally used alcohol and this was also true of ganja and cigarettes ($p<0.001$). Alcohol appeared to be most widely used among their peers with over 35.0% of female and 50% of male respondents reporting that it is used by all, most, or some of their peers. Ganja (27.0%, M & 16.0%, F) and cigarette (21.0%, F & 13.0%, F) were the next most frequently reported drugs used among peers of Jamaican youth.

Table 11.17: Recreational Drug Use in Peers of Jamaican Youth 15-19 Years, Jamaica, 2006

Peers who use Recreational drugs	None	A few	Some	Most	All	Total
Ganja* M	45.6	26.1	13.8	8.6	5.9	100.0
F	66.4	17.4	9.4	5.3	1.5	100.0
Cocaine/Crack M	99.6	0.4	0.0	0.0	0.0	100.0
F	99.6	0.3	0.0	0.0	0.1	100.0
Alcohol*** M	18.3	26.5	18.5	15.1	21.6	100.0
F	32.3	30.9	13.7	13.2	9.9	100.0
Cigarettes*** M	46.1	32.3	12.2	6.5	2.8	100.0
F	61.7	24.5	7.5	5.2	1.2	100..0
Other Drugs M	98.6	0.9	0.5	0.0	0.0	100.0
F	99.3	0.6	0.0	0.0	0.1	100..0

*** p< .001, ** p< .01, * p < .05

11.5 Socioeconomic Differentials in Substance Use

Table 11.18 shows that male predominance in risk behaviour was consistent across all three domains and within all three social classes. There was no statistically significant association between socioeconomic status and being drunk, use of illegal drugs and cigarette smoking. For both males and females the point estimate of cigarettes use was consistent across social classes. There is a hint of greater drunkenness and lower use of illegal drugs in higher social classes. The use of illegal drugs did show some sex differences where among all the socioeconomic classes, significantly more males than females reported use of illegal drugs (13.2% vs. 2.9%).

Table 11.18 Percentage of 15-19 Year Olds Who Used Substances in The Past Year by Type of Substance Use, Household Socioeconomic Status and Sex, Jamaica, 2006

	Socioeconomic Status		
Risk Behaviour	Low	Middle	High
Drunk during past year			
Male	16.3	20.3	20.9
Female	12.3	17.6	14.4
Total	14.5	19.1	18.6
Used illegal drugs in past year			
Male	18.0	16.2	13.2
Female	5.6	6.2	2.9
Total	1.4	11.3	8.4
Ever used cigarettes			
Male	7.4	7.2	7.2
Female	3.0	2.9	3.0
Total	5.2	5.1	5.2

While not achieving statistical significance the level of drunkenness and use of illegal drug use was highest among youth in single maternal households and the lowest point estimates was lowest in single paternal households. Of note, there was not a single occurrence of drunkenness, illegal drug use or cigarette smoking among female youth in paternal only households (Table 11.19). The lack of significant differences in the prevalence of risky behaviour by the characteristics examined in Table 11.18 and 11.19 suggests that socio-economic status and parental presence may not be associated with any of the risk behaviours investigated

Table 11.19: Percentage of 15-19 Year Olds Who Used Substances in The Past Year by Type of Substance Used, Parental Presence and Sex, Jamaica, 2006

Substance Use	Parental Presence		
	One Biological (father)	One biological (mother)	Both biological parents
Drunk during past year			
Male	11.6	19.2	12.5
Female	0.0	16.3	11.4
Total	7.4	17.9	12.1
Used illegal drug in past year			
Male	7.9	17.2	11.9
Female	0.0	6.5	1.8
Total	4.6	11.5	7.6
Ever used cigarettes			
Male	5.2	6.9	6.4
Female	0.0	2.1	1.2
Total	3.1	4.3	4.1

Adolescents with only primary or lower education had higher frequency of involvement in drunkenness, the use of illegal drugs, and cigarette smoking when compared to those with secondary education. With the exception of cigarette smoking, the relationship persisted when compared to those with post secondary education. (Table 11.20).

Table 11.20 Percentage of 15-19 Year Olds Who Used Substances in The Past Year by Type of Substance Use, Level of Education and Sex, Jamaica, 2006

Type of Substance Use	Education		
	Primary or lower	Secondary	Post-secondary
Drunk during past year			
Male	38.3	18.8	13.5
Female	13.4	14.2	16.3
Total	29.6	16.8	14.7
Used illegal drugs in past year			
Male	36.5	14.8	22.7
Female	6.7	4.7	6.1
Total	23.5	9.8	13.7
Ever used cigarettes			
Male	15.7	6.1	22.2
Female	6.7	2.9	2.2
Total	11.7	4.5	11.7

Youth who reported being in a union had higher frequencies of involvement in drunkenness, use of illegal drugs and cigarette smoking compared to those outside of a union. Similarly, having no religion was associated with a greater propensity for getting drunk in the past year. (Table 11.21).

Table 11.21: Within and Across Sex Proportion (%) of 15-19 Year Olds with Respective Background Characteristics Who Practiced Risky Behaviours, Jamaica, 2006

	Union Status						Religiosity								
	In Union[1]			Other			Christian			Other religion			No religion		
Risky Behaviour	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Drunk during past year	27.1	24.7	25.7	18.7	12.7	16.2	16.2	13.0	14.7	15.6	0	10.5	27.4	25.2	26.8
Used illegal drug in past year	33.6	9.3	17.7	14.8	4.5	9.8	13.2	4.3	20.8	33.5	0	20.8	19.3	11.1	16.5
Used Cigarettes	10.4	6.2	7.6	7.2	2.6	5.0	6.8	2.8	4.6	19.5	0	12.1	6.3	5.4	5.9

M = male; F = female; T = total; [1] in married, common-law or visiting relationship

Table 11.22 suggests that among males who drink, the presence in the home (always or often) of five of the six resiliency factors examined was associated with reduced prevalence of drunkenness .This compares with only one of six such factors being significantly associated with reduced drunkenness among females. Among the females the only factor significantly associated with reduced drunkenness in the past year was the constant or nearly constant presence in the home of an adult who talked to the teen about her problems with 4.4% of females with this factor reporting drunkenness versus 8.3% of those without the protective factor.

Table 11.22: Percentage of Adolescents Aged 15-19 Who Became Drunk in The Past Year by Sex and Protective Factors in The Home, Jamaica, 2006

PRESENCE IN HOME OF ADULT WHO:	Males	Females	Total
Expects you to follow the rules			
Sometimes, rarely or never	14.4*	6.5	10.5**
Always or often	9.6	5.9	7.7
Believes you will be a success			
Sometimes, rarely or never	18.0**	7.4	12.9**
Always or often	8.9	5.7	7.3
Has time to pay much attention to you			
Sometimes, rarely or never	9.9	6.7	8.3
Always or often	10.4	5.8	8.1
Talks with you about problems			
Sometimes, rarely or never	13.6*	8.3**	10.9***
Always or often	7.8	4.4	6.1
Always or often wants you to do your best			
Sometimes, rarely or never	22.2**	9.3	16.5**
Always or often	9.1	5.7	7.4
Listens when you have something to say			
Sometimes, rarely or never	16.1***	7.2	11.2***
Always or often	8.9	5.5	7.3

*** p< .001 ** p< .01 * p < .05

Resiliency/protective factors outside of the home were less consistently protective against drunkenness (four of eight) for males. Table 11.23 shows that male teens who at least almost always had access to a caring adult or to an adult with high expectations of them outside the home, compared with those who have less frequent access, reported lower levels of drunkenness in the previous year. Significantly lower rates of drunkenness were reported if the adult noticed the teen's absence ($P<0.01$); listened to the teen ($P<0.05$); believed the teen would be a success ($P<0.05$); or noticed when the teen was upset ($P<0.001$). Among females, the protective effect of the tabulated indices is not demonstrated as the percentages were higher when females had at least almost always constant access to a caring adult or to an adult with high expectations outside the home, and are significantly higher if the adult told her when she had done a good job or noticed her absence.

Table 11.23: Percentage of Adolescents Aged 15-19 Who Became Drunk in The Past Year by Sex and Protective Factors Outside The Home, Jamaica, 2006

PRESENCE OUTSIDE HOME OF ADULT WHO:	Males	Females	Total
Really cares about you			
Sometimes, rarely or never	12.4	6.9	9.9*
Always or often	10.3	5.8	8.0
Tells you when you do a good job			
Sometimes, rarely or never	13.6	4.9***	9.4**
Always or often	9.8	6.2	8.0
Notices when you are not there			
Sometimes, rarely or never	14.5**	4.0*	9.8***
Always or often	8.7	6.5	7.6
Always wants you to do your best			
Sometimes, rarely or never	17.1	7.1	12.4
Always or often	9.9	5.9	7.9
Listens when you have something to say			
Sometimes, rarely or never	11.1*	5.6	8.5**
Always or often	10.8	6.1	8.5
Believes you will be a success			
Sometimes, rarely or never	17.2*	5.3	11.9*
Always or often	9.6	5.8	7.7
Notices when you are upset about something			
Sometimes, rarely or never	15.2***	5.5	11.0***
Always or often	8.7	6.1	7.4
Who you trust			
Sometimes, rarely or never	12.9	5.6	9.2*
Always or often	9.9	5.7	7.9

*** p< .001 ** p< .01,* p < .05

Resiliency factors in the home did not consistently protect against illegal drug use. Table 11.24 shows that illicit drug use in the previous year was lower among teens who reported having in the home an adult who at least almost always cared or had high expectations of them. In males, the significantly lower (P<0.05) levels of drug use were reported only if the adult always wanted the teens' best effort or listened to the teen. In females the levels were significantly lower if the adult concerned expected the teen to follow the rules (P<0.05); talked to the teen about her problems (P<0.05); or listened to the teen (P<0.01).

Table 11.24: Percentage of Adolescents Aged 15-19 Who Used Any Illicit Drugs in The Past Year by Sex and Protective Factors in The Home, Jamaica, 2006

PRESENCE IN HOME OF ADULT WHO:	Males	Females	Total
Expects you to follow the rules			
Sometimes, rarely or never	20.0	9.8*	14.9
Always or often or often	14.5	4.3	9.4
Believes you will be a success			
Sometimes, rarely or never	20.5	8.1	14.5*
Always or often	14.5	3.9	9.2
Has time to pay much attention to you			
Sometimes, rarely or never	14.7	5.4	10.1
Always or often	16.4	4.8	10.6
Talks with you about problems			
Sometimes, rarely or never	16.4	7.3*	11.7
Always or often	14.4	3.3	8.9
Always or often wants you to do your best			
Sometimes, rarely or never	26.6*	9.3	19.0**
Always or often	13.9	4.5	9.2
Listens when you have something to say			
Sometimes, rarely or never	21.6*	10.0**	15.2**
Always or often	13.8	3.3	8.7

*** p< .001 ** p< .01 * p < .05

Table 11.25 also shows a lower percentage of illicit drug use among Jamaican 15-19 year-olds who constantly or nearly constantly had access to an adult outside the home who cared for or had high expectations of them. For males, the percentages were significantly lower if the adult told him when he had done a good job (P<0.05); always wanted the youth best effort (P<0.01); or believed the teen would be a success (P<0.05). Among females, significantly lower levels of illicit drug use was reported if the adult offering the protective factor at least almost always cared deeply for the teens; or noticed when they were upset about something.

Data shown in Tables 11.22 – 11.25 suggest that male teens' access to an adult inside or outside the home who provided a listening ear can lower their tendency towards illicit drug use and drunkenness. Among females, access to an adult inside the home who talked to the teen appeared to lower their tendency towards illicit drug use or drunkenness.

Table 11.25: Percentage of Adolescents Aged 15-19 Who Used Any Illicit Drugs in The Past Year by Sex and Protective Factors Outside The Home, Jamaica, 2006

PRESENCE OUTSIDE HOME OF ADULT WHO:	Males	Females	Total
Really cares about you			
Sometimes, rarely or never	20.6	12.5***	16.9**
Always or often	14.7	3.8	9.3
Tells you when you do a good job			
Sometimes, rarely or never	21.0*	6.9	14.3*
Always or often	14.1	4.6	9.3
Notices when you are not there			
Sometimes, rarely or never	17.7	6.8	12.8
Always or often	15.1	4.8	9.8
Always wants you to do your best			
Sometimes, rarely or never	26.2**	9.0	18.2***
Always or often	14.3	4.5	9.4
Listens when you have something to say			
Sometimes, rarely or never	19.2	7.9	13.9
Always or often	15.0	4.5	9.7
Believes you will be a success			
Sometimes, rarely or never	23.8*	12.6	18.8***
Always or often	14.3	3.9	9.1
Notices when you are upset about something			
Sometimes, rarely or never	20.5	9.5**	15.8**
Always or often	13.9	3.7	8.6
Who you trust			
Sometimes, rarely or never	19.0	7.9	13.4
Always or often	14.8	4.1	9.6

*** p< .001 ** p< .01,* p < .05

11.6 Conclusions

Half of the youth under study used alcohol but less than 10.0% of them reported drunkenness. Apart from ganja, no other illegal drug use was reported in this study. Ganja use was more frequent than cigarette smoking and almost 80.0% of youth are exposed to second-hand smoking.

Drug and alcohol use did not appear to vary by socio-economic status. The majority of youth reported easy access to ganja and more than half of male youth reported that they had peers who smoked ganja. Father's presence and higher educational attainment appeared to be associated with lower prevalence of substance use among male youth.

The impact of the presence of an adult in the home was enhanced if that adult showed interest in the youth by enquiring about his/her problems.

11.6 Recommendations

Programmes that encourage a fuller role for parents should be developed and made sustainable to empower young parents.

Raising educational levels must be a main objective of any intervention programme for youths of all ages.

CHAPTER 12

REPRODUCTIVE HEALTH

12.1 Sources of information on reproductive health

The study gathered data from respondents regarding the sources from which they received information about sex. Table 12.1 gives the proportions of 15-19 year olds who obtained information from the respective sources. Overall schools, friends/peers, the electronic media, mothers, and print media were the most commonly reported sources of information in rank order of frequency. Each of these was mentioned by approximately 40.0% or more of this age group as a source to obtain information on sex. There were significant sex differences in the frequency with which some sources of information were mentioned, with larger proportions of females ($P<0.01$) getting information on sex from mothers, aunts or uncles, grandparents, school and print media. Males mentioned friends/peers, girlfriends, fathers and the electronic media more frequently than females but these differences were not statistically significant. Both males and females reported that most information was obtained from school (both > 50.0% frequency) followed by friends/peers. (Table 12.2)

There was a statistically significant differences between sexes in the sources from which the teenagers learned most about sex ($P<0.0001$). These sex differences may possibly reflect, for example, the sex-specific interests of females in reading and males in electronic gadgets as sources of information.

Table 12.1: Percentages of Jamaican 15-19 Year-Olds Who Use The Named Sources to Obtain Information on Sex, Jamaica, 2006

Sources	Males	Females	Total
Mother ***	34.5	54.1	44.2
Father	20.3	17.2	18.7
Sibling	3.6	3.1	3.3
Aunt/uncles***	1.7	6.6	4.1
Cousins	2.1	2.1	2.1
Grandparents***	0.9	3.0	1.9
Boy/Girlfriend	13.7	15.3	14.5
Friends/Peers	50.6	44.1	47.4
School***	76.8	84.8	80.8
Printed media*	35.7	43.5	39.6
Electronic Media	47.8	43.0	45.4
Church/Community	1.4	2.9	2.2
Health facility	1.0	1.7	1.4
No Source	1.5	0.7	1.1

p <0.05; ** p<0.01; *** p<0.001

Table 12.2: Percentages of Jamaican 15-19 Year-Olds Who Learned Most From The Named Sources of Information on Sex, Jamaica, 2006

Sources	Males	Females	Total
Mother	1.9	4.0	2.9
Father	2.4	1.2	1.8
Other relatives	2.0	2.8	2.4
Boy/Girlfriend	2.7	2.0	2.4
Friends/Peers	20.5	11.5	16.2
School	50.5	58.3	54.2
Printed media*	4.9	10.5	7.6
Electronic Media	14.1	9.5	11.9
Church/community	0.8	0.3	0.6
No Source	0.4	0	0.2

*p<0.05; ** p<0.01; *** p<0.001

12.2 Sexual practices

Respondents were asked about different aspects of their sexual behaviour and the levels at which they occurred. Item non-response was less than 5.0% for items relating to sexual activity. Table 12.3 gives summary statistics that describe the prevalence of different risk behaviours in Jamaican 15-19 year-olds.

Being sexually active, for the purposes of this study, was defined as having had sexual intercourse before the time of interview. Thus, nearly 60.0% of total respondents and a significantly larger (P<0.001) percentage of males (69.0% vs. 48.0%) were classified as sexually active. Less that 4.0% of males and females had engaged in same-sex relations. Condom use and use of family planning methods were relatively high among those who reported they had a previous sexual encounter with over 80.0% of sexually active teens reporting condom use. A significantly larger percentage of females reported sexual intercourse resulting in pregnancy (25.1% vs. 6.2% of males) and that their first sexual encounter was forced or unwanted (5.6% vs. 2.1% males). The proportion who reported having greater than five sexual partners in their lifetime was significantly greater in males (51.0% vs. 6.0%) (Table12.3).This differential could represent the tendency of over-reporting of sexual activity by males and under-reporting by females. Various check questions were instituted throughout the module to prevent/adjust for this known predisposition. The same trend is noted for the number of reported sexual partners in the past three months. Among those who had initiated sexual activity, the age at sexual debut was lower in males than females (13.3 vs. 15.3 years). At age 15 years 75.0% of boys have already been sexually active and girls achieve this by age 16 years.

Table 12.3: Summary Statistics (Percentages and Age Percentiles for Age of Sexual Debut) Describing Sexual Practices of Jamaican 15-19 Year-Olds, Jamaica, 2006

Sexual Practices	Males	Females	Total
Kissed or petted male	2.6	73.9	61.8
Kissed or petted female	89.9	3.9	38.2
Sexually Active ***	68.9	48.3	59.1
#Use of Family Planning Methods	89.7	86.9	88.5
#Condom Use at last sex	87.2	78.9	83.7
#Been /or got some one pregnant ***	6.2	25.1	13.9
#Forced/Unwanted Sex***	2.1	5.6	3.9
#Number of Lifetime partners			
1	14.6	47.0	28.4
2	13.3	27.2	19.2
3	12.9	13.2	13.1
4	8.2	6.7	7.6
≥5	51.0	6.0	31.9
#Number of partners in last 3 months			
0	28.9	27.8	28.4
1	34.1	67.8	48.1
2	17.4	3.9	11.8
3	8.2	0.3	4.9
4	4.4	0.0	2.6
≥5	7.0	0.3	4.3
#Age of sexual debut (years)			
25^{th} Percentile	12	14	13
50^{th} Percentile (median)	13	16	14
75^{th} Percentile	15	16	16
Mean	13.3	15.3	14.1

#among persons reporting they had sex previously

Table 12.4 shows that the proportion of youth who are sexually active increases from 32.7% among 15 year olds to 86.1% among 19 year olds. Condoms and other forms of family planning used by sexually active youth remained high across all ages. By age 19 years the prevalence of having been or gotten someone pregnant and having forced or unwanted sex had more than doubled compared to age 15 years. The prevalence of forced or unwanted sexual encounter and pregnancy increases significantly with age.

Table 12.4: Percentages of Respective Ages with Given Sexual Behaviours, Jamaica, 2006

Behaviour	Age 15	Age 16	Age 17	Age 18	Age 19
Sexually Active ***	32.7	54.9	68.9	81.7	86.1
Use of Family Planning Methods	88.3	90.1	87.3	89.7	87.0
Condom Use	85.5	87.8	81.8	84.0	78.9
Been /or got some one pregnant *	7.5	7.7	12.9	23.1	17.8
Forced/Unwanted Sex***	4.0	7.5	9.4	9.6	8.7

p<0.05, *** p<0.001

The most popular form of family planning used by 15-19 year old adolescents at last sex was a condom (86.5% among males and 76.1% among females) (Table 12.5).

Table 12.5: Percentage of 15-19 Year Olds Who Used Different Family Planning Methods at Last Sex, Jamaica, 2006

Family Planning Method	Males	Females	Total
None	9.6	12.8	10.9
Withdrawal	4.1	6.1	4.9
Condom	86.5	76.1	82.2
Injection	0.0	4.2	0.0
Birth control pill	0.0	7.3	0.0
Morning after pill	0.0	0.4	0.0
Sponges, diaphragms, douches	0.0	0.3	0.0
N	408	355	703

Most 15-19 year olds reported using family planning at last sex (65.9%) but females reported lower usage (59.7%) compared to males (70.3%). In instances when no family planning method was used the major reason cited was not having time to prepare (11.8%), did not think of or did not want to use birth control. A larger proportion of females report not wanting to use birth control (8.7% vs. 3.5%) and it is note worthy that 7.1% of females compared to 0.8% males reported that their partner's refusal was the reason for not using birth control (Table 12.6).

Table 12.6: Percentages Reporting Given Reasons for Failure to Use Birth Control at Last Sex, Jamaica, 2006

Reason	Males	Females	Total
Did not think of birth control	6.6	9.9	8.0
Did not want to use birth control	3.5	8.7	5.6
Partner did not want to use it	0.8	7.1	3.4
It is wrong to use birth control	0.0	2.1	0.9
Did not have time to prepare	13.1	10.0	11.8
Sex is not as enjoyable	4.1	3.6	3.9
Too much hassle to use	0.5	0.3	0.4
Did not know where to obtain	0.3	0.6	0.4
Too expensive	0.0	0.0	0.0
High on drugs or alcohol	0.0	0.0	0.0
Did not want partner to think I am promiscuous	0.0	1.1	0.5
Always use birth control	70.3	59.7	65.9

The main source of obtaining family planning for 15-19 year olds was ”buy at a shop” with significantly more males reporting this source than females,(T60.5%, M74.9%F38.2%, p<0.001). The main source for females aged 15-19 years was their partner (41.0%) but this was closely followed by purchasing at a shop (38.2%). The local clinic was preferred by 16.4% of respondents and this was similar in males and females while some males more so than females relied on their friends (15.5% vs. 3.8%) and family (4.6% vs. 3.7%) (Table 12.7).

Table 12.7: Percentages of Youth Who Obtain Family Planning Supplies from Given Sources, Jamaica, 2006

Sources	Males	Females	Total
Local clinic	15.4	17.8	16.4
Buy at a shop***	74.9	38.2	60.5
Private doctor*	0.8	3.0	1.6
Partner	3.4	41.0	18.2
Friend	15.5	3.8	10.9
Family member***	4.6	0.7	3.0
N	381	305	686

** p<0.01

More females reported having a sexually transmitted infection than male (7.3% vs. 2.7%, p<0.01) and females were also more likely to receive money or gifts for sex (6.8% vs. 4.8%) while males more frequently gave money for sexual favours (7.7% vs. 2.0%). (Table 12.8)

Table 12.8: Percentages of Youth with Given Sexual Experiences, Jamaica, 2006

Experience	Males	Females	Total
Received money or gifts for sex	4.8	6.8	5.6
Given money or gifts for sex**	7.7	2.0	5.4
Had a STI**	2.7	7.3	4.6
Had a genital discharge in past year	11.2	16.3	13.3
Had a genital sore in past year	0.5	1.9	1.1
N	405	351	756

** p<0.01

12.3 Socioeconomic Differentials

Youth who lived with the father only as the biological parent seemed to be more likely to have had sex and also more likely to have had an unwanted first sexual encounter. The use of family planning and in particular the condom was consistently high across all parental home situations. Pregnancy among female youth was highest among girls who lived in mother-only homes but the rate was similar among girls from homes where both parents were present. (Table 12.9)

Table 12.9: Prevalence (%) of Sexual Practices among Participants with The Respective Background Characteristics, Jamaica, 2006

Sexual Practices	Parental Presence								
	One Biological (father)			One biological (mother)			Both biological parents		
	M	F	T	M	F	T	M	F	T
Used Family Planning[1]	82.8	94.7	82.8	93.6	88.9	91.6	85.8	87.5	86.4
Used a condom at last sex[1]	81.5	86.0	83.1	92.3	85.0	89.2	82.1	79.7	81.3
Ever had sex	73.5	55.2	65.9	68.3	45.5	56.2	63.7	38.9	52.9
First sexual encounter Unwanted[1]	10.1	28.4	16.4	3.7	19.7	10.6	6.3	22.9	11.6
Been/got a girl pregnant	0	15.2	5.2	8.1	24.9	15.2	3.6	19.9	8.8

M = male; F = female; T = total

[1]Percentages out of those who ever had sex

There appears to be little variation in family planning and condom use by social class. However, low socioeconomic status appeared to be associated with a higher frequency of ever having sex and also with unwanted sexual encounters and pregnancy, compared to persons of middle or high socioeconomic status. (Table 12.10)

Table 12.10: Prevalence (%) of Sexual Practices among Participants in Given Socioeconomic Groups, Jamaica, 2006

Sexual Practices	Socioeconomic Status								
	Low			Middle			High		
	M	F	T	M	F	T	M	F	T
Used Family Planning[1]	88.6	84.2	86.6	90.8	90.4	90.6	90.2	88.6	89.7
Used a condom at last sex[1]	85.3	76.9	81.4	89.9	81.8	86.6	87.2	79.7	84.6
Ever had sex	70.1	52.8	61.0	71.4	52.8	62.3	65.4	40.0	53.6
First sexual encounter unwanted[1]	7.7	28.2	17.1	2.8	22.7	11.0	5.4	7.3	6.1
Been/got a girl pregnant	6.2	31.6	17.7	6.4	19.8	11.9	6.2	17.8	10.2

M = male; F = female; T = total

[1]Percentages out of those who ever had sex

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Condom use appeared to be more frequent among persons with secondary and post-secondary education compared to those with primary education or lower. Use of other family planning appeared to be unaffected by educational achievement but there was a higher level of unwanted/forced first sexual encounter in female youth with secondary or only primary education or lower compared to those with post-secondary education . The trend among male youth suggests a lower occurrence of unwanted/forced first sexual encounter among more educated youth but the differences were small (Table 12.11).

Table 12.11: Prevalence (%) of Sexual Practices among Participants with Given Levels of Education, Jamaica, 2006

Sexual Practices	Education								
	Primary or lower			Secondary			Post-secondary		
	M	F	T	M	F	T	M	F	T
Used Family Planning	80.6	92.0	85.6	90.1	86.5	88.6	89.8	91.5	89.8
Used a condom at last sex	64.9	67.0	65.9	88.5	79.7	84.8	79.4	78.6	79.0
Sexually active	74.8	75.1	74.9	68.1	47.3	57.8	81.1	64.9	72.5
[2]First sexual encounter unwanted	8.1	24.2	15.1	5.7	22.7	12.7	3.3	13.1	8.0
Been/got a girl pregnant	0.0	49.2	21.6	7.0	24.8	14.2	0.0	21.2	10.0

[1]In union included persons who were in visiting relationship, common law and married

[2] First sexual encounter unwanted included those who responded as being forced into sex or did not agree but said or did nothing

Use of family planning seemed unaffected by union status or religion and condom use was less frequent among those female youth in a union (Table 12.12). Among persons in a union (versus those not in unions) there were higher percentages of persons reporting sexual activity, unwanted first sexual encounter, pregnancy and absence of condom use. Persons who had no religion were also more likely to be sexually active.

Table 12.12: Prevalence (%) of Sexual Practices among Participants with The Respective Background Characteristics, Jamaica, 2006

	Union Status						Religiosity								
	In Union[1]			Other			Christian			Other religion			No religion		
Sexual Practices	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Used Family Planning	85.2	80.9	82.5	90.2	88.1	89.4	89.9	90.2	88.2	90.6	100	92.4	90.1	90.2	90.1
Used a condom at last sex	81.4	58.0	66.6	87.7	83.6	86.2	88.9	78.8	84.2	90.6	100	92.4	85.3	83.4	79.4
Sexually active	100	92.5	95.1	67.3	44.4	56.2	65.8	47.5	55.9	51.7	20.8	40.0	76.8	71.2	74.9
[2]First sexual encounter unwanted	14.4	25.5	21.4	4.8	18.6	10.2	6.0	20.9	12.9	9.4	36.8	14.8	3.8	18.4	8.4
Been/got a girl pregnant	25.4	55.9	44.7	4.4	18.1	9.6	6.0	24.5	14.4	9.4	0	8.0	6.9	29.9	14.3

M = male; F = female; T = total

[1]Percentages out of those who ever had sex

12.4 Protective Factors

The data in Table 12.13 demonstrate the protective effect on youth of having in their homes an adult who cared for or had high expectations of them. Fewer of the teenagers who at least almost always had access to the previously described adult in the home report that they ever had sexual intercourse. A significantly lower percentage of males reported that they ever had sexual intercourse if in their homes there was an adult who expected them to follow the rules ($P<0.001$); or believed they would be successful ($P<0.05$). Among females, a significantly lower percentage reported that they ever had sexual intercourse if in their homes there was at least almost always an adult who always wanted their best effort ($P<0.01$); or talked to them about their problems ($P<0.05$). Both males and females who had in their homes the constant, or almost constant presence of an adult who listened when they had something to say, reported significantly lower ($P<0.05$) levels of sexual activity. Male and female youth had a statistically significant benefit from three of the six factors investigated but only one of these was shared, i .e. often or always having someone to listen to them.

Table 12.13: Percentage of Adolescents Aged 15-19 Who Have Ever Had Sexual Intercourse by Sex and Protective Factors in The Home, Jamaica, 2006

PRESENCE IN HOME OF ADULT WHO:	Males	Females	Total
Expects you to follow the rules			
Sometimes, rarely or never	85.2***	75.1	80.2***
Always or often or often	66.2	44.3	55.3
Believes you will be a success			
Sometimes, rarely or never	78.8*	62.4	71.0**
Always or often	67.0	45.8	56.4
Has time to pay much attention to you			
Sometimes, rarely or never	71.8	51.8	37.7
Always or often	67.2	47.3	57.2
Talks with you about problems			
Sometimes, rarely or never	73.4	56.7**	64.9**
Always or often	64.9	42.8	54.1
Always or often wants you to do your best			
Sometimes, rarely or never	78.4	71.0**	75.1***
Always or often	67.4	46.7	57.0
Listens when you have something to say			
Sometimes, rarely or never	76.3*	55.9*	65.1**
Always or often	66.6	45.9	56.6

*** p< .001 ** p< .01 * p < .05

Data in Table 12.14 demonstrate the lower levels of reported sexual activity among Jamaican 15-19 year-olds who often or always have an adult outside their home who cared for them. Significantly fewer ($P<0.05$) males reported ever having sexual intercourse if constantly or almost constantly they had, outside the home, an adult who listened to them or whom the teens trusted. Although fewer of the females with constant or almost constant levels of the respective tabulated indices reported ever having sexual intercourse, none of the differences (relative to percentages among females with lower frequency of a caring adult) were statistically significant. Averaged across the sexes, however, fewer of the teens' who had constant or almost constant access to an adult outside the home who acknowledged a job done well or noticed the teens' absence, reported that they have ever had sexual intercourse.

Table 12.14: Percentage of Adolescents Aged 15-19 Who Have Ever Had Sexual Intercourse by Sex and Protective Factors outside The Home, Jamaica, 2006

PRESENCE OUTSIDE HOME OF ADULT WHO:	Males	Females	Total
Really cares about you			
Sometimes, rarely or never	74.3	52.3	64.3
Always or often	67.8	48.2	58.0
Tells you when you do a good job			
Sometimes, rarely or never	75.9	54.5	65.6*
Always or often	66.7	47.3	57.9
Notices when you are not there			
Sometimes, rarely or never	76.0	54.2	66.3*
Always or often	65.6	48.1	56.7
Always wants you to do your best			
Sometimes, rarely or never	84.3	56.9	71.5**
Always or often	66.4	48.2	57.3
Listens when you have something to say			
Sometimes, rarely or never	76.9*	50.5	64.6
Always or often	67.0	49.4	58.2
Believes you will be a success			
Sometimes, rarely or never	78.6	50.9	66.4
Always or often	66.8	48.6	57.6
Notices when you are upset about something			
Sometimes, rarely or never	73.2	49.5	63.0
Always or often	67.1	49.6	58.0
Who you trust			
Sometimes, rarely or never	75.7*	47.7	61.6
Always or often	67.2	50.5	59.0

*** p< .001 ** p< .01 * p < .05

Table 12.15 shows that condom use was higher amongst the male youth who constantly or almost constantly had in their homes an adult who cared for or who had high expectations of them. For males, the percentages were significantly higher (P<0.05) if the adult expected the youth to follow the rules; believed the youth would succeed; always or often wanted the youth's best effort; or listened to them. For females, the percentages were significantly higher (P<0.05) if the adult concerned constantly or almost constantly believed the teen would be a success.

Table 12.15: Percentage of Condom Use in Adolescents Aged 15-19 Who Used a Condom at Last Sexual Intercourse by Sex and Protective Factors in The Home, Jamaica, 2006

PRESENCE IN HOME OF ADULT WHO:	Males	Females	Total
Expects you to follow the rules			
Sometimes, rarely or never	79.1*	70.9	75.3**
Always or often or often	88.8	82.7	86.3
Believes you will be a success			
Sometimes, rarely or never	79.5*	69.1*	75.2**
Always or often	88.5	83.6	86.5
Has time to pay much attention to you			
Sometimes, rarely or never	88.1	80.3	84.8
Always or often	86.8	80.0	84.0
Talks with you about problems			
Sometimes, rarely or never	83.5	77.1	80.6*
Always or often	89.8	82.5	87.0
Always or often wants you to do your best			
Sometimes, rarely or never	75.1*	77.9	76.3
Always or often	89.1	80.6	85.6
Listens when you have something to say			
Sometimes, rarely or never	80.2*	78.2	79.3
Always or often	88.9	80.7	85.7

*** p< .001 ** p< .01 * p < .05

Higher levels of condom use were not reported by groups of teens who had outside their homes constant or nearly constant access to caring adults according to all the indices listed in Table 12.16. Among males, the only index that was significantly ($P<0.05$) protective against failure to use a condom was constant or almost constant access to an adult who listened to the teen. A higher percentage of condom use was also reported among males who had constant or almost constant access to an adult, outside the home, who really cared about them but this difference was not statistically significant. There were no significantly higher levels of condom use when the females who had constant or almost constant access to a caring adult outside the home were compared with females having less frequent access.

Data in Table 12.13 to Table 12.16 suggest that access to an adult who provided a listening ear was more likely to be protective for males, more so than females, from the early sexual encounters or non- condom use amongst the sexually active.

Table 12.16: Percentage of Condom Use in Adolescents Aged 15-19 Who Used a Condom at Last Sexual Intercourse by Sex and Protective Factors outside The Home, Jamaica, 2006

PRESENCE OUTSIDE HOME OF ADULT WHO:	Males	Females	Total
Really cares about you			
Sometimes, rarely or never	90.3	80.1	86.5
Always or often	86.6	78.9	83.3
Tells you when you do a good job			
Sometimes, rarely or never	84.9	78.7	82.4
Always or often	87.9	78.8	84.1
Notices when you are not there			
Sometimes, rarely or never	86.7	80.7	84.5
Always or often	87.9	78.9	84.0
Always wants you to do your best			
Sometimes, rarely or never	91.8	88.4	90.5
Always or often	86.7	76.9	82.6
Listens when you have something to say			
Sometimes, rarely or never	81.8*	81.6	81.7
Always or often	89.1	78.0	84.4
Believes you will be a success			
Sometimes, rarely or never	91.9	79.0	87.6
Always or often	87.4	78.1	83.4
Notices when you are upset about something			
Sometimes, rarely or never	90.9	78.6	86.7
Always or often	86.2	79.5	83.2
Who you trust			
Sometimes, rarely or never	82.0	77.5	80.2
Always or often	89.3	79.5	85.2

12.5 Conclusion

Age of sexual initiation was early and pregnancy was reported by a quarter of females in this age group. Condom and other family planning use were high suggesting a high level of responsibility.

Commercialization of sex is present even at this young age. High expectations, a feature of resiliency was protective against sexual activity and where sexual activity did occur, these high expectations were associated with increased condom use.

Schools are a major source of information on sex for both sexes but apart from that, girls and boys favour different sources with girls reporting mothers, the media and friends/peers while boys favoured the media and friends and less frequently, their parents.

12.6 Recommendations

Increasing the number and scope of earlier sex education programmes in schools, including targeting efforts at earlier age groups, should be facilitated. A variety of alternate activities should also be encouraged among youth. Parents and care-givers are to be encouraged to actively participate and show interest in the lives of their children. Greater use should be made of the media to provide sex-specific messages that target youth.

CHAPTER 13

SOURCES OF INFORMATION

The study sought to determine the main sources of health information upon which youth rely in order to target health promotion approaches to respond to the health problems identified by this survey.

Less than one percent of youth 15-19 years old reported no source of information on health. The three most frequently selected sources of information on health were school/classes (65.7%), a parent or family member (49.1%), and the television (43.0%). A significantly greater proportion of females accessed their health information through health workers and the print media (Table 13.1). For this study, persons were also classified as using print media if they reported using books as a source of information.

Table 13.1: Distribution (%) of Sources of Health Information among 15-19 Year Old Jamaican Males and Females, Jamaica, 2006

Sources	Males	Females	Total
None	0.8	0.5	0.7
Health Worker*	26.1	32.5	29.3
School Talk/Classes	66.0	65.4	65.7
Television	43.0	42.9	43.0
Radio	20.4	24.4	22.4
Print Media***	13.7	24.9	19.3
Parent/Family Member	46.7	51.6	49.1
Friend	14.0	14.8	14.4

Compared with 19 year-olds, significantly larger proportions of 15 year olds receive their information on health from school (75.0% vs.46.7%) and family (56.7% vs. 47.2%). On the other hand, the use of television, radio, or the print media as sources of information appeared to increase significantly with age (Table 13.2). Thus, the older adolescents tended to receive their information from audiovisual and print media.

Table 13.2: Distribution (%) of Sources of Health Information among 15-19 Year Old Jamaicans by Age, Jamaica, 2006

Sources	15	16	17	18	19
None	0.9	0.3	0.7	0	1.8
Health Worker	26.6	31.7	28.8	31.9	28.3
School Talk/Classes***	75.0	74.0	63.9	51.6	46.7
Television***	37.8	28.5	42.7	49.9	56.9
Radio**	21.2	17.2	45.0	29.2	29.6
Print Media*	16.4	16.4	19.6	21.7	29.1
Parent/Family Member**	56.7	49.4	40.0	48.6	47.2
Friend	15.5	13.8	12.2	17.4	13.0

The top three preferred sources of information on health for 15-19 year olds were the health worker (36.1%), television (32.2%) and school talks (30.3%) Table 13.3 also shows that a significantly larger percentage of females versus males, preferred to get their health information from the health worker. Parent and family members continue to be an important source of information with more than a quarter of the youth indicating a preference for this avenue of information. The relatively low level of preference for radio and the print media at 18% and 11% respectively is worthy of note.

Table 13.3: Distribution (%) of Preferred Sources of Health Information among 15-19 Year Old Jamaican Males and Females, Jamaica, 2006

Preferred source	Males	Females	Total
Health Worker**	31.8	40.5	36.1
School Talk/Classes	31.4	29.1	30.3
Television	33.1	31.3	32.2
Radio	16.8	18.7	17.7
Print Media	10.0	11.9	11.0
Parent/Family Member	29.6	26.8	28.2
Friend	6.2	7.7	6.9

There are significant differences between age groups with regard to where adolescents would want to obtain their information on health. The younger ages preferred to obtain information from a school source whereas the older age groups preferred audiovisual and print media.
Table 13.4 shows that, as expected, fewer ($P<0.001$) of the older teenagers preferred the school talks or classes as their source of health information while preference for the television, radio and print media increased ($P<0.05$) with age. The health worker and television were the most commonly preferred sources of information, particularly among the 16-19 year-olds.

Table 13.4: Distribution (%) of Preferred Sources of Health Information among 15-19 Year Old Jamaicans by Age, Jamaica, 2006

Preferred Source of Information on Health	15	16	17	18	19
Health Worker	34.5	37.4	35.3	39.5	34.2
School Talk/Classes***	43.1	33.9	26.6	17.5	12.8
Television**	26.7	32.2	30.2	36.9	44.5
Radio *	12.7	15.6	23.0	19.7	23.0
Print Media*	8.9	10.7	11.6	12.9	13.3
Parent/Family Member	32.7	29.5	27.2	24.3	20.7
Friend	6.7	4.2	8.5	5.9	12.2

There were no sex or age differences in the number of times per month or week that teenagers listened to the radio. Approximately 70.0% of youth listened to the radio every day, which was consistent across the ages (Table 13.5 and Table 13.6).

Table 13.5: Frequency of Listening to The Radio by Sex among 15-19 Year-Olds Youth, Jamaica, 2006

Frequency	Males	Females	Total
Never	2.5	2.1	2.3
Less than once per month	2.5	2.0	2.2
At least once per month	1.5	3.2	2.4
Once per week	9.6	11.5	10.6
2-3 times per week	11.5	11.4	11.4
Everyday	71.8	68.9	70.4

Table 13.6: Frequency of Listening to The Radio among 15-19 Year Olds Youth by Age, Jamaica, 2006

Frequency of listening to the radio	15	16	17	18	19
Never	2.5	2.2	1.7	4.1	1.1
Less than once per month	2.2	2.2	2.5	1.0	4.0
At least once per month	3.7	1.9	2.2	1.0	2.1
Once per week	9.9	10.6	9.2	14.6	9.7
2-3 times per week	14.4	10.8	13.7	7.3	7.2
Everyday	67.4	72.3	70.7	72.0	76.0

Almost half of the 15-19 year olds reported getting information on dental care from parents or family members (48.2%M, 40.5%F, 44.4%T) and approximately 40.0% from a dentist or healthcare provider (Table 13.7). More females than males reported getting information on dental care from a dentist; however, there was no significant sex difference. Less than 3.0% of the youth in this age group reported having no source of information on dental care.

Table 13.7: Sources of Information on Dental Care among 15-19 Year Olds Jamaican Adolescents, Jamaica, 2006

Sources	Males	Females	Total
No Source	3.3	2.5	2.9
Dentist	31.3	41.2	36.2
Other healthcare provider	2.8	3.3	3.1
Group Talks	8.9	7.2	8.1
Television	1.2	2.1	1.7
Radio	1.1	0.5	3.9
Print Media	0.7	0.4	0.6
Parent/family Member	48.2	40.5	44.4
Internet	0.2	0.2	0.2

13.1 Conclusions

The preferred source of health information among youth was health care workers and therefore these workers should be adequately prepared to provide this information. Among media, electronic is preferred to print

13.2 Recommendations

Health care workers should be prepared for the role of health education. These workers should receive youth-specific training in skills, communication, and knowledge thus creating "youth-friendly" environments within health facilities. The electronic media should be creatively used to transmit health messages to youth.

CHAPTER 14

ANTHROPOMETRY AND BIOMEDICAL MEASURES

14.1 Chronic Non-communicable Diseases

Table 14.1 shows the overall of prevalence of markers of CVD risk. Diabetes as defined by the WHO criteria (42) for a fasting capillary blood sample was present in 2.0% of youth while hypertension and prehypertension as defined by the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7) criteria (43) was present in 4.1% and 29.1% of youth respectively. Male prevalence exceeded that in females for the three aforementioned markers in all cases but only in the case of prehypertension did this difference achieve conventional levels of statistical significance.

According to the WHO criteria (21) more than 19.0% of youth were overweight and 5.7% were obese. There were significant sex differences with estimates for overweight (23.8 vs. 14.9%; $p<0.01$) and obesity (7.4 vs. 4.1%; $p<0.05$) being higher in females compared to males. Using gender-specific internationally recognized cut-points (44;45) of waist circumference (WC) and waist-to-hip ratio (WHR) which are associated with increased cardiovascular risk, we found that a large proportion of female youth were at increased risk. Increased WC was present in 15.1% of females compared to 2.2% of males and WHR was increased in 18.6% of females and 0.6% of males ($P<0.001$ for both comparisons).

Table 14.1: Sex-Specific Percentages (%) for The Measured Health Indices among Jamaican Youth, Jamaica, 2006

Health Indicator	Males	Females	Total
Diabetes	2.4	1.5	2.0
Hypertension	5.0	3.2	4.1
Prehypertension**	34.5	23.5	29.1
Hyperlipidaemia	1.0	1.0	1.0
Overweight (BMI ≥25 kg/m^2)**	14.9	23.8	19.3
Obesity (BMI ≥30 kg/m^2)*	4.1	7.4	5.7
Underweight	14.8	15.6	15.2
Increased waist circumference***	2.2	15.1	8.6
Increased Waist Hip Ratio(WHR)***	0.6	18.6	9.5
N	598	719	1317

p<0.05; ** p<0.01; *** p<0.001

Table 14.2 gives the prevalence of nutritional status and physical activity levels for urban and rural residents by sex. The urban-rural differences in the proportion of youth in the physical activity categories were not statistically significant within or across sex. For both geographic regions more males than females were classified as being at high physical activity. There were statistically significant differences ($P<0.05$) between the geographic regions when the distributions of the BMI categories are compared. Across sex, rural residents had higher levels of underweight (17.2% vs. 13.4%) and normal weight (67.8% vs. 63.6%) and lower levels of overweight (10.6% vs. 16.2%) and obesity (4.4% vs. 6.8%). The same patterns in urban-rural difference were seen in the sex-specific data but these did not achieve statistical significance. Thus the prevalence of overweight and obesity combined, 23.0%, is significantly higher ($P<0.01$) in urban residents compared with rural residents (15.0%). Sex-specific urban-rural estimates were also significantly different ($P<0.05$).

Table 14.2: Prevalence of Varying Health Indices within and across Geographical and Sex Categories, Jamaica, 2006

	Urban			Rural		
Health Indicators	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**
Physical Activity Level						
Low	31.8	25.0	38.8	29.9	19.4	39.4
Moderate	19.1	14.7	23.7	25.4	21.1	29.4
High	49.1	60.3	37.5	44.7	59.6	31.3
NutritionalStatus(BMI)						
Underweight(<18.5kg/m^2)	13.4	13.1	13.8	17.2	17.0	17.4
Normal (18.5-24.99 kg/m^2)	63.6	68.8	58.2	67.8	72.1	63.9
Overweight(25-29.99 kg/m^2)	16.2	13.2	19.3	10.6	8.1	12.8
Obese (≥30 kg/m^2)	6.8	4.9	8.8	4.4	2.8	5.9
Total	100.0	100.0	100.0	100.0	100.0	100.0
N	738	355	383	579	336	243

Figure 14.1 and Table 14.3 show the prevalence of hypertension and pre-hypertension within categories of body mass index (BMI). Table 14.3 also shows the prevalence of hypertension and diabetes in the different BMI categories. Within and across sex, pre-hypertension levels were highest among the obese. Within each BMI category, males had higher levels of pre-hypertension, compared with females. There was a tendency for hypertension to increase with higher categories of BMI and in females this achieved statistical significance. Combining pre-hypertension and hypertension and exploring the association with overweight and obesity revealed that for overweight the association was statistically significant in females ($p<0.001$) but not in males, and for obesity the association was significant in males ($p<0.02$) and in females ($p<0.001$) (data not shown). These data do not give evidence that the levels of diabetes vary significantly as BMI categories change.

Figure 14.1: Prevalence of Prehypertension by BMI and Sex in Jamaican Youth, Jamaica, 2006

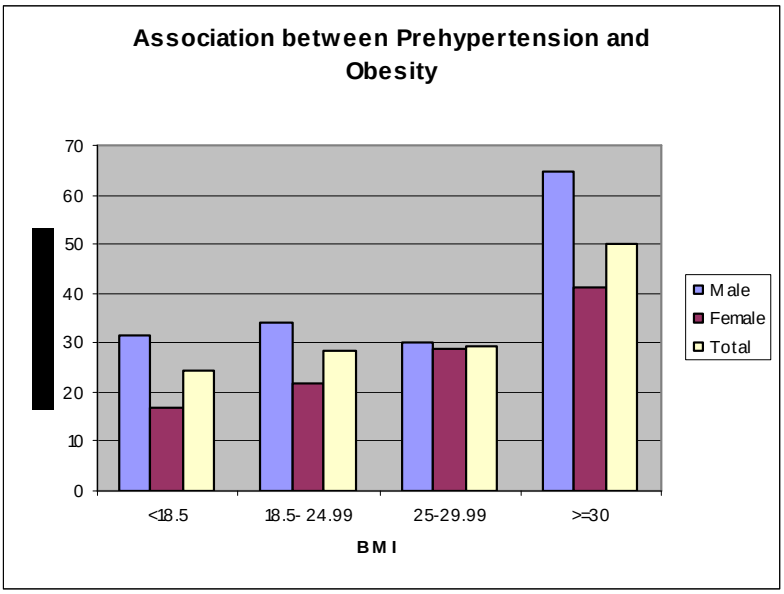

Table 14.3: Prevalence (%) of Chronic Diseases within BMI Category by Sex, Jamaica, 2006

	Pre-hypertension			Hypertension			Diabetes		
BMI (kg/m^2)	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
< 18.5 Underweight)	31.4	17.0	24.2	4.6	2.9	3.8	1.0	3.0	2.0
18.5 – 24.99 (Normal)	34.2	21.6	28.4	5.4	2.4	4.0	3.0	1.5	2.3
25.0 – 29.99 (Overweight)	30.0	28.7	29.2	4.7	5.1	5.0	1.8	0.0	0.7
≥ 30 (Obese)	64.8	41.3	49.9	0.0	5.9	3.7	0.0	2.0	1.3
Total	34.6	23.6	29.1	5.0	3.2	4.1	2.4	1.5	2.0

Table 14.4 shows the associations between CNCD risk indices and some putative risk factors among males. Alcohol use and vegetable consumption (divided into "failure to meet requirements" and "meeting or exceeding" requirements) were not associated with diabetes, hypertension or markers of obesity. Adequate fruit consumption (classified similarly to vegetable consumption) was associated with lower prevalence of overweight (10.9% vs. 18.6%; $p<0.05$). Increased sweet drink consumption was associated with lower obesity prevalence (3.4 vs. 9.1%; $p<0.05$). There were no significant associations among females for any of the comparisons (Table 14.5).

Table 14.4: Prevalence of CVD Risk Indices among Males by Putative Health Seeking Behaviours, Jamaica, 2006

	Health Indicators				
Lifestyle Behaviours	**Diabetes**	**Prehypertension**	**Overweight**	**Increased WC**	**Obesity**
Cigarette Smoking					
Yes	0.7	40.1	11.9	1.4	3.3
No	3.1	39.2	15.9	2.5	4.4
Alcohol use					
Yes	1.1	41.8	14.5	3.0	5.0
No	2.4	36.1	16.2	1.5	3.5
Adequate Vegetable consumption					
Yes	0.8	33.6	15.3	3.5	7.0
No	2.9	41.0	14.2	1.9	3.5
Adequate Fruit Consumption					
Yes	1.3	41.8	10.9*	1.5	2.7
No	3.5	37.0	18.6	2.5	5.1
High Sweet Drink Consumption					
Yes	2.2	39.1	14.6	2.0	3.4*
No	4.7	44.1	16.8	3.7	9.1
Physical Activity					
Low	6.4***	34.1*	16.0	2.2	2.2
Moderate	0.0	31.5	14.0	1.9	6.3
High	1.6	43.8	14.8	2.2	4.1

p< 0.05 ;*** p< 0.001

Table 14.5: Prevalence of CVD Risk Indices among Females by Putative Health Seeking Behaviours, Jamaica, 2006

Lifestyle Behaviours	Health Indicators				
	Diabetes	**Prehypertension**	**Overweight**	**Increased WC**	**Obesity**
Cigarette Smoking					
Yes	3.1	35.1	25.1	14.0	6.6
No	1.2	25.0	23.6	15.5	7.7
Alcohol use					
Yes	1.1	31.1	24.2	18.3	7.2
No	2.4	22.2	22.0	11.9	7.7
Adequate Vegetable consumption					
Yes	1.8	25.0	22.5	16.3	4.7
No	1.5	27.0	24.1	15.0	8.0
Adequate Fruit Consumption					
Yes	1.6	29.2	23.6	16.1	7.6
No	1.5	25	24.0	14.8	7.5
High Sweet Drink Consumption					
Yes	1.5	26.6	24.1	14.8	7.3
No	2.0	28.7	20.5	19.9	8.4
Physical Activity					
Low	0.8	25.0	21.7	11.4	5.3
Moderate	3.0	33.1	20.8	15.7	7.7
High	1.3	23.7	28.1	18.7	9.6

14.2 Conclusions

While the prevalence of chronic non-communicable diseases is low, obesity occurs commonly among youth with females bearing the greater burden as estimated by BMI and waist circumference. Prehypertension, a recently described entity is more frequent among males but is more strongly associated with BMI in females.

14.3 Recommendations

Efforts to reduce obesity must be a major initiative in health promotion among youth. This will require a multi-sectorial approach.

CHAPTER 15

GENERAL CONCLUSIONS

This study recognizes the importance of adolescent health to the nation's well-being, and acknowledges that these data will have implications both for the adolescent population and subsequent adulthood. One major objective of our study was *the improvement of the health status among youth and vulnerable target groups.* This was estimated in the areas of reproductive health, injuries and violence, substance abuse and markers of chronic non-communicable diseases.

The majority of youth have adequate modern social amenities including running water, toilet facilities and basic household possessions. Data from the Jamaica Survey of Living Condition indicate that on average 61.0% of youth 15-18 years are enrolled in school. This enrolment rate is similar to data obtained from this study which show that 65.0% of youth 15-19 years were enrolled in school(31).

The results of this survey showed that dietary habits and physical activity did not achieve the recommended levels among the majority of youth; interventions in this area may impact positively in lowering the incidence of obesity and other chronic diseases in this age group. This study has provided baseline estimates for the prevalence of chronic diseases in this population showing obesity at 5.7%, diabetes 2.0%, hypertension 4.1% and hyperlipidaemia 1.0%.

Sexual debut continues to occur at an early age, estimated at 13 and 15 years for males and females respectively which shows change when compared to 2002(29). Sixty nine per cent of boys and 48.0% of girls reported ever having sexual intercourse and these represent marginal reduction compared to 2002(29). Condom use has increased from 49.0% to 79.0% and 61.0% to 81.0% among females and males respectively. Twenty five per cent of females reported a previous pregnancy and 6.0% of males reported having impregnated a female. Our data do not allow for the computation of the youth fertility rate. While there are no baseline data for comparison, 4.0% of youth in this survey reported that their first sexual encounter was either forced or unwanted.

The increasing occurrence of suicide and substance abuse in this age group is of growing concern worldwide. Prior experience of ganja smoking was reported by 19.0% of youth in this study and there is an increase in prevalence reported ganja smoking in the previous year from 4.4% in 2001 to 11.0% as reported in this study(29). There is therefore a need to enforce the policies aimed at reducing the use of this substance among youth. There are no existing data for comparison, but of the 49.0% of youth who reported alcohol use in this study, 8.0% became drunk in the past year. Involvement of youth in violence was estimated at 20.0% compared to 23.6% in 2004(29).

Depressive symptoms (loneliness, feeling down or depressed) were more frequently reported by females, while depression was estimated to be present in 10.0% of these youth. Data from this study indicates that 6.0% of youth 15-19 years old have considered suicide and half of that group has attempted suicide.

Resiliency, defined as caring relations and high expectations inside and outside the home and having someone to trust, was present in more than half of the youth but while most of these protective factors were reported by three-quarters of the youth, caring relationships in the home

was reported by just over a half. Caring relationships inside and outside the home were protective against risky behaviour.

Connectedness to parents and school was assessed. Over 90.0% of youth who were currently enrolled in school reported that they liked school and 59.0% report being involved in extra-curricular activities.

These data provide important insights into the burden of risky sexual behaviour, involvement in violence and chronic diseases as well as those factors which are associated with risky behaviour and ill health. It appears that caring homes and communities which also have high expectations of our youth are to be promoted and efforts should be should be made to improve dietary intakes and physical activity levels in accordance with recommendations.

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Appendix 1

YOUTH RISK AND RESILIENCY LIFESTYLE SURVEY (15-19 YRS) 2006

PROJECT STAFF ALLOCATION PLAN

REGION	SUPERVISORS	TEAM LEADERS
South East:	2	2
North East:	1	1
Southern:	1	1
Western:	1	2

Table showing average number of interviews in each region

Region	**# Interviews**	**# of Interviewers**	**Avg # per Interviewer**
South East	570	12	48
North East	240	6	40
Western	240	6	40
Southern	270	6	45
Totals	1320	30	44

Appendix 2

REFERRAL PROCEDURES for Mental Health Problems
(Dr Yvonne Bailey Davidson)

1. Establish rapport, support, kind regard and confidentiality
2. Identify the symptoms or problems
3. Explain the meaning of their symptoms or problems
4. Explain about going to the counsellor
5. Discuss the importance of seeing the counsellor
6. Tell about the free counselling
7. Ask for the parents and speak with them
8. Give a written note
9. GIVE THEM THE NAME OF THE CLINIC OR PERSON
10. Check back with the participant to see if they went to the appointment.
11. Get mother's cell number

Appendix 3

Referral Slip

Re:

Dear Sir/Madam,

Your child participated in the Jamaica Youth Risk and Resiliency Survey conducted during the period June – September 2006. As a part of the survey we wish to help in addressing any needs that were found during the interview. We need your permission to allow your ward to visit with Dr Bailey-Davidson for a free counselling session at an appointed time. The transportation cost will be borne by survey. We hope you will take advantage of the opportunity, which will further enhance your child's true potential.
If you have any questions, please do not hesitate to contact myself or Dr Yvonne Bailey-Davidson.

Yours sincerely,

Shelly McFarlane
National Coordinator
Jamaican Youth Risk & Resiliency Survey 2006
Tel #s 876 9776151, 9193719(C&W) 4040260(Digicel) 3011547(Miphone)

Dr Y Bailey-Davidson:- 9784281

Appendix 4

Referral Slip

To: Dr Yvonne Bailey-Davidson
Re:

This respondent participated in the Jamaica Youth Risk and Resiliency Survey (15-19yrs) 2006. Using the DSM-V Criteria for analysis, the participant had a score of > 5 for the module administered.

Could you kindly conduct a follow-up visit for the participant send the invoice to:-

Professor Rainford Wilks
Director- Epidemiology Research Unit
Tropical Medicine Research Institute
University of the West Indies
Mona, Kingston 7
Tel: 876- 9776152

Appendix 5

Referral Slip

To Whom It May Concern:
Re:

This respondent participated in the Jamaica Youth Risk and Resiliency Survey (15-19yrs) 2006.
As a part of the survey the respondent's blood pressure, fasting glucose and cholesterol were measured. The results were as follows:

BP _____
FBG_____
Cholesterol_____

Could you kindly conduct a follow-up visit for the participant send the invoice to:-

Professor Rainford Wilks
Director- Epidemiology Research Unit
Tropical Medicine Research Institute
University of the West Indies
Mona, Kingston 7
Tel: 876- 9776152

Appendix 6

Quality Check showing Percent Agreement between Supervisor and Interviewer in Duplicate Interviews

Figure 14

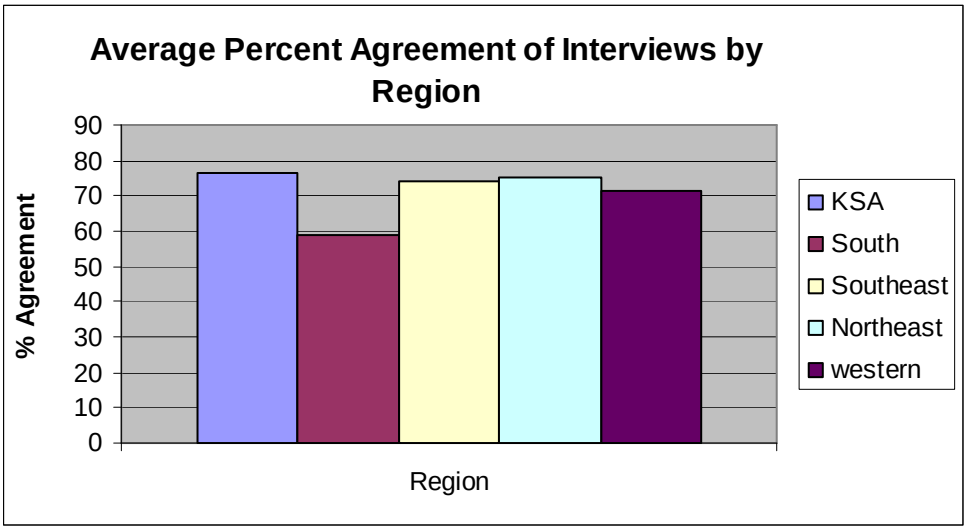
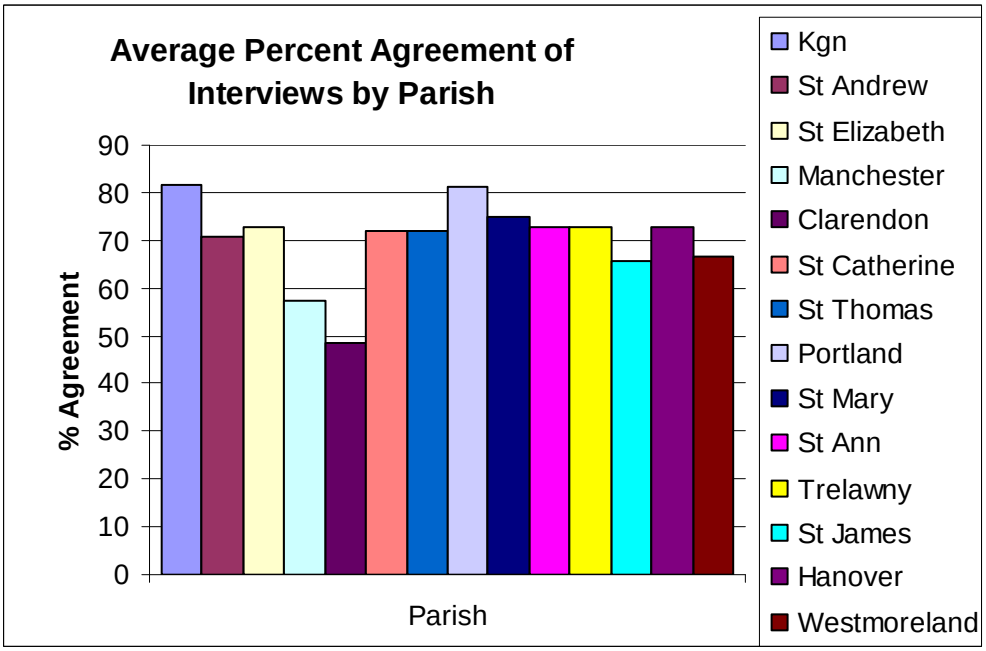
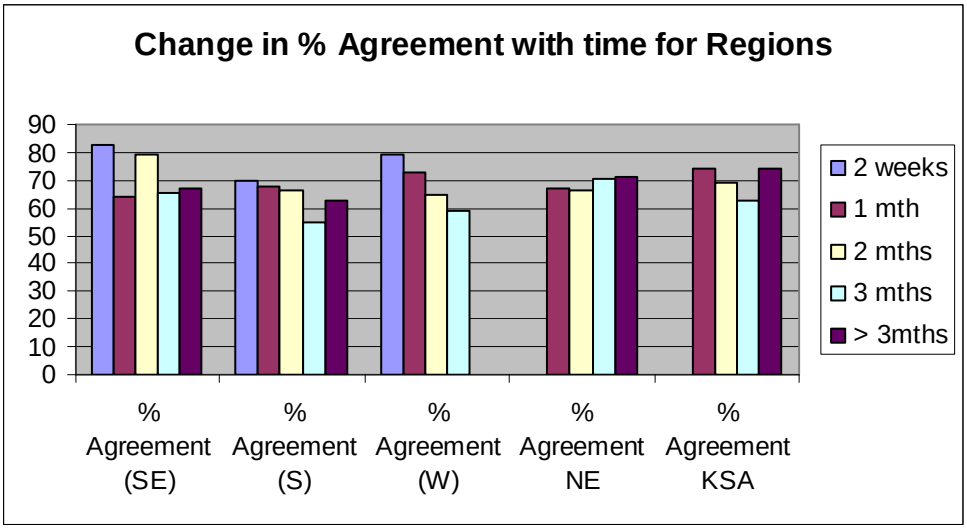


Figure 15



Appendix 6 cont'd

Figure 16



Appendix 7

Formulas and Definitions

Test-retest reliability

The intra-person correlation coefficient is a measure of test-retest reliability and used independent replicate measurements from a single individual. The interviewer and the supervisor obtained these measurements. The test-retest reliability (ρ) is estimated as follows

ρ = (between-person variance) ÷ (between-person variance + within person variance)

A higher value of ρ implies greater agreement between interviewer and supervisor measurements.

Intra-interviewer Correlation Coefficient

The intra-interviewer correlation coefficient **(ρ_{int})** is a measure of the degree to which the interviewers influence survey responses for a survey item.

ρ_{int} = (between-interviewer variance) ÷ (between-interviewer variance + within interviewer variance)

The design effect for interviewers ($deff_{int}$) is the measure of the increase in variance of the mean of a simple random sample due to interviewer variance.

$deff_{int} = 1 + (m\text{-}1)\rho_{int}$ where *m* is the average interviewer workload for the survey in terms of number of interviews.

Technical Error of Measurement

Unreliability is calculated as square of Technical Error of Measurement (TEM) = square root of within subject variance obtained from replicate measurements taken within a very short time (short time in order to have no influence of undependability). Level of acceptability varies with measure being made (Mattorell).

TEM with 2 measurements on N subjects: $TEM = [(\text{sum } (d^2)/2N)]^{0.5}$

With d = difference between duplicates

Appendix 8

Distribution of 15-19 year olds in Jamaica by Parish and Sex (2001)

Parish & Sex	Total	15-19 Yrs	Percent-Island
All Jamaica	2607633	**251879**	**9.66**
Male	1283547	126464	9.85
Female	1324086	125512	9.48
Kingston	96052	**9361**	**3.72**
Male	46540	4692	10.08
Female	49512	4669	9.43
St Andrew	555827	**52564**	**20.87**
Male	262197	25486	9.72
Female	293630	27078	9.22
St Thomas	91604	**8637**	**3.43**
Male	45729	4407	9.64
Female	45875	4230	9.22
Portland	80205	**7569**	**3.01**
Male	39978	3830	9.58
Female	40227	3739	9.29
St Mary	111466	**10471**	**4.16**
Male	55673	5347	9.60
Female	55793	5124	9.18
St Ann	166762	**16312**	**6.48**
Male	83782	8333	9.95
Female	82780	7979	9.64
Trelawny	73066	**7259**	**2.88**
Male	37126	3592	9.68
Female	35940	3667	10.20
St James	175127	**17013**	**6.75**
Male	85973	8475	9.86
Female	89154	8538	9.58
Hanover	67037	**6326**	**2.51**
Male	33749	3205	9.50
Female	33288	3121	9.38
Westmoreland	138947	**13457**	**5.34**
Male	70786	6877	9.72
Female	68161	6580	9.65
St Elizabeth	146404	**14283**	**5.67**
Male	74737	7486	10.02
Female	71667	6797	9.48
Manchester	185801	**18118**	**7.19**
male	93224	9260	9.93
Female	92577	8858	9.57
Clarendon	237025	**24127**	**9.58**
male	119651	12213	10.21
Female	117374	11914	10.15
St Catherine	482308	**46478**	**18.45**
male	234202	23260	9.93
Female	248106	23218	9.36

Appendix 8 cont'd

Population by Single Year 15-19 by Parish, 2001

Parish	Total	Age									
		15 years		16 years		17 years		18 years		19 years	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Kingston	**9,361**	905	870	978	912	950	941	959	1,027	901	918
St. Andrew	**52,564**	5,016	5,159	4,969	5,254	5,156	5,261	5,350	5,924	4,995	5,480
St. Thomas	**8,637**	911	878	882	889	863	881	898	817	853	765
Portland	**7,569**	784	748	802	812	803	784	767	745	674	650
St. Mary	**10,471**	1,108	1,066	1,183	1,106	1,077	1,011	1,079	1,023	899	919
St. Ann	**16,312**	1,663	1,538	1,764	1,733	1,612	1,632	1,715	1,610	1,579	1,466
Trelawny	**7,259**	764	840	784	779	713	728	727	687	604	633
St. James	**17,015**	1,710	1,651	1,742	1,873	1,692	1,721	1,710	1,793	1,622	1,501
Hanover	**6,325**	684	685	678	646	634	634	647	627	561	529
Westmoreland	**13,457**	1,299	1,380	1,447	1,427	1,430	1,321	1,441	1,262	1,260	1,190
St. Elizabeth	**14,284**	1,524	1,390	1,506	1,454	1,521	1,310	1,599	1,394	1,336	1,250
Manchester	**18,119**	1,872	1,733	1,828	1,765	1,905	1,832	1,980	1,892	1,676	1,636
Clarendon	**24,127**	2,530	2,536	2,581	2,531	2,573	2,335	2,473	2,448	2,056	2,064
St. Catherine	**46,477**	4,627	4,556	4,755	4,677	4,622	4,579	4,853	4,910	4,403	4,495
Total	**251,977**	**25,397**	**25,030**	**25,899**	**25,858**	**25,551**	**24,970**	**26,198**	**26,159**	**23,419**	**23,496**

Source: Population Census 2001, Statistical Institute of Jamaica

Appendix 9

Jamaican Youth Risk and Resiliency Survey 2006: Data Use Calendar

May 30, 2007

Group: Reproductive Health

Decision/Issue	Decision Maker	Stakeholders	Required Information	Next Steps	Date/ Timeline
Impact of HIV - concern re HIV - sex risk differences	MOH	MOH- Healthy Promotion and HIV control MOE- HFLE curriculum	Risk and resiliency factors Risk groups	Analyse data to identify factors associated with concerns - risk behaviour - mental health - household	ASAP
Pregnancy Prevention - Exclude withdrawal as a valid contraceptive method	National family Planning Board	Parents Health Care Workers	Valid data on Family planning practices Identify what contraceptives adolescents are being given Risk & Resiliency factors	Access to contraceptives in age group in schools, health centres Provide additional services to teens who get pregnant or who get a girl pregnant	ASAP
Sexual abuse -Legal Changes in how cases are prosecuted	MOH Ministry of Justice	Police Force Members of Parliament	Concerns re abuse and their predictors - risk and resiliency factors - behaviours - mental health issues	Analyse data to address this issue.	

Appendix 9 cont'd

Group: Resiliency

Decision/Issue		Stakeholders	Required Information	Next Steps	Date/ Timeline
Create more extracurricular activities outside of school "From 2-6"	Multisectorial approach between the MOE and MOEY	Citizen's Associations, Churches, Political Leadership and security forces	Caring relationships outside of the home. High expectations outside the home. Protective factors against some risky behaviours eg. Ganja use, Sexual activity	Further analysis to explore the benefits of these protective factors and risky behaviour	
Develop and advocate for a multisectorial parent education programme	MOH Health Promotions. MOE,local PTAs	Community, Church, schools and parents	Parental Presence and Risky Behaviours. Caring relationships within the home High expectations in home Hope Enterprise Study 2001	Conduct planning of key stakeholders to develop or improve programmes on parent education workshops	
Youth Friendly Dissemination of the survey findings	Research Institute, MOEY, National Council of Secondary Schools representative	Youth Aged 10-19 years Church Youth groups	Survey Report on Findings	Convene with representative of youth groups and the research institutes	**Summer 2007**

Appendix 9 cont'd

Group: Socioeconomic Data

Decision/Issue	Decision Maker	Stakeholders	Required Information	Next Steps	Date/ Timeline
Make education appropriate to meet the needs of both sex Early identification of persons with learning difficulties	MOE MOE/MICO Care	Teachers & Students Students, Teachers & Parents to create environment conducive to learning at home	Sex Specific best practices available Urban- Rural Distributions Teachers need to be trained to identify the extent and types of learning difficulties	Revise curriculum to permit flexibility in teaching methods and delivery Create programme to help children with learning difficulties	 NOW
Parental Presence- Educate both parents (even if not living together) on successful ways of positive interaction with children. Group: Mental Health	MOE/MOH	Parents, Communities, Schools	Determination of groups that need special attention	Mobilize existing social groups to facilitate dissemination of information	Review completed, September 2007
Decision/Issue	**Decision Maker**	**Stakeholders**	**Required Information**	**Next Steps**	**Date/ Timeline**
Depressive Symptoms Parasuicide	MOH, MOEYC NGO, UWI	Students, Parents, Professional community	Research in Sex Issues, Prevalence/Incidence Resiliency factors, Risk Factors	Dissemination of results Augmentation of services	**Two years**

Appendix 9 cont'd

Group: Chronic Diseases

Decision/Issue	Decision Maker	Stakeholders	Required Information	Next Steps	Date/ Timeline
Physical Activity -need to make physical activity mandatory throughout high school - strengthen existing programmes in MOH eg Healthy zones - develop community based activities geared at increasing physical activity	MOEYC Dir HPP Min of Health MOH Ministry of works	MOH University researchers CFNI USAID NGOs CBOs	Further Association analyses to -determine the reason for physical inactivity in females -evaluate obesity trends - to explain suggested increased physical activity and increased blood pressure in males List of existing community based programmes to facilitate physical activity among youth	Review School Health Policy	**November 2007**
Dietary Intake - improve intake of fruits and vegetables - Decrease consumption of high fat, sugars and salt	MOH MOH	CFNI NGOs Communities Gov Organizations MOE	Further association and analysis relating to intake of fruits and vegetables Detailed information on dietary intake	Strengthen, education and promotion campaign (collaborative) Reduce the cost of fruits and vegetables Re-instate food industry task force Support the development of food and health policy Legislation relating to food labelling	2008
Conduct JYRRBS every five years	USAID MOH UWI-TMRI	General population MOEYC	Budget	Seek funding and write proposal Determine team	**2011**

Appendix 9 cont'd

Group : Violence

Decision/Issue	Decision Maker	Stakeholders	Required Information	Next Steps	Date/ Timeline
Violence is everybody's problem. Extracurricular activity extended in schools Music Programme geared at improving behaviour Guidance Counseling Curriculum to be developed Programme targeting institutions outside of school Crime Youth Watch	MOE MOH MOE VPA PMI	MOH MOE Youth Groups NGOs PMI SAFE school representatives PALS Guidance Counselors VPA PMI	Further Association analyses to - look more closely on the "unattached grouping" eg who is not in schools What is considered violence, who are the perpetrators? Who are victims? Where is the violence most prevalent? Home/school/communities List of existing community based programmes to reduce violence among youth	Strengthen inter-agency collaboration through umbrella groups eg VPA, PMI and key in to programmes that work and extend them Invite the youth to participate in the discussions Program planning and advocacy Program Improvement and Design Program Mgmt and Operations	**November 2007**

Summary of key recommendations from all groups

1. Improving certain existing social programmes to educate the public on the issues at hand.
2. Provide access to information on the issues at hand and disseminate the information to the youth at their level.
3. The decision makers and stakeholders are multi-sectorial therefore more collaborative effort is needed.
4. Develop positive activities for youth.
5. Support systems need to be implemented for the home environment e.g. parenting
6. More analytical associations are needed from the study especially urban/rural distribution of certain indices.

Appendix 9 cont'd

Acronyms

NFPB	National Family Planning Board
PMI	Peace Management Initiative
MOH	Ministry of Health
MOE	Ministry of Education
HFLE	Home and Family Life Education
MOEYC	Ministry of Education Youth and Culture
MOW	Ministry of Works
NGO	Nongovernmental organizations
CBO	Community Based Organizations
HP	Health Planning
UWI	University of the West Indies
CFNI	Caribbean Food & Nutrition Institute
PALS	Peace and Love in Schools
VPA	Violence Prevention Alliance

Appendix 10

Project Team

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South East Region

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Western Region

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	Tanesha Anglin
	Rosetta Green
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Appendix 11

Alcohol Classifications

Coolers: - Coloured beverages with spirit base. E.g. wine, malt, rum, vodka
Wine coolers have 5% alcohol e.g. Arbor Mist
Malt/Spirit based coolers 5-6% alcohol e.g. Smirnoff Ice, Bacardi Breathers
Beer coolers have 3-4% alcohol e.g. Shandy

100% proof is 57.1 % alcohol/volume under the UK guidelines.
50.0% alcohol /volume under the US Guidelines.

JB is actually 86% alcohol/volume which is classified overproof.

Spirits- Gins: - 40% Alcohol
Whiskeys: - 40-43% Alcohol
Vodkas: - 40% Alcohol

Brews- Beers: - 4% alcohol
Stout: - approx 8% alcohol

Liqueurs- Sansgter Rum cream: - 17% alcohol
Mudslide: - 15% alcohol
Baileys: - 17% alcohol

Appendix 12

LIST OF ACRONYMS USED

A&E	Accident and Emergency
AIDS	Acquired Immunodeficiency Syndrome
BMI	Body Mass Index
CFNI	Caribbean Food & Nutrition Institute
CI	Confidence Interval
CNCD	Chronic Non-Communicable Disease
CVD	Cardio-Vascular Disease
DBP	Diastolic Blood Pressure
DSM-V	Diagnostic Screening Manual
ED	Enumeration District
ERU	Epidemiology Research Unit
FBG	Fasting Blood Glucose
GCT	Glucose Cholesterol Testing
HC	Hip Circumference
HFLE	Home and Family Life Education
HIV	Human Immunodeficiency Virus
HP	Health Planning
ICCC	Intra-Class Correlation Coefficient
IICC	Intra-Interviewer Correlation Coefficient
IPAQ	International Physical Activity Questionnaire
J-CAR	Jamaica Caribbean
JNC-7	Joint National Council on Hypertension
KSA	Kingston and St Andrew
MOE	Ministry of Education
MOH	Ministry of Health
MOW	Ministry of Works
NE	North East
OR	Odds Ratio
PPS	Probability Proportionate to Size
PSU	Primary Sampling Unit
SE	South East
SBP	Systolic Blood Pressure
SES	Socio-Economic Status
STATIN	Statistical Institute of Jamaica
TEM	Technical Error of Measurements
USAID	United States Agency for International Development
UWI	University of the West Indies
WC	Waist Circumference
WHO	World Health Organization
WHR	Waist Hip Ratio

Appendix 13

YOUTH RISK AND RESILIENCY BEHAVIOUR SURVEY (15-19 YRS) 2006 QUESTIONNAIRE

PARISH _____

INTERVIEWER _____ INTERVIEWER NO. |____|____|

NO. OF TIMES HOUSEHOLD VISITED |___|

DATE OF INTERVIEW |___|___|___|___|___|___||___||___|
DD MM
YY

REGION NO.	|____|	ENUMERATION DISTRICT NO.	|___|___|___|
PARISH NO.	|____|____|	RESPONDENT NO.	|____|____|

TOTAL TIME OF INTERVIEW – HOURS |___| MINUTES |___|___|

Start time of interview HOURS |___| MINUTES |___|___|
End time of interview HOURS |___| MINUTES |___|___|

THIS SECTION IS TO BE COMPLETED BY THE Supervisor/National Coordinator:

Questionnaire Checked		Date:

Staff code

|____|____| _____
Signature

[__|__][__|__]
2006
D M

|____|____| _____
Signature

[__|__][__|__]
2006
D M

|____|____| _____
Signature

[__|__][__|__]
2006
D M

Has this questionnaire been returned to correct errors?
If yes, list items:

A. DEMOGRAPHIC INFORMATION

1. How old were you at your last birthday?

[____]
[___][___] Years

2. Observed Sex (*Interviewer, tick the sex of the respondent)*

[____]

1.Male [___] 2. Female

3. What is the highest level of schooling that you have attained? *(Tick relevant option)*

[____]

1. No schooling	[___]	2. Grade 1	[___]	3. Grade 2	[___]
4. Grade 3	[___]	5. Grade 4	[___]	6. Grade 5	[___]
7. Grade 6	[___]	8. Grade 7	[___]	9. Grade 8	[___]
10. Grade 9	[___]	11. Grade 10	[___]	12. Grade 11	[___]
13. Sixth Form (Grade 12/13)	[___]	14. Technical/ Vocational	[___]	15. College/ University	[___]
88. Don't Know	[___]	99. No response	[___]		

4. Are you currently in school?

[____]

0. No	[___]	1. Yes	[___]
88. Don't know	[___]	99. No response	[___]

5. What is your main occupation? (*Prompt if necessary)*

_____

6. What is your employment status?

[____]

1. Full-time *(30 or more hours/week*	[___]	2. Part-time *(29 or fewer hours/week)*	[___]
3. Seasonally employed	[___]	4. Unemployed and looking	[___]
5. Unemployed and not looking (SKIP TO Q.10)	___]	6. Student (SKIP TO Q.10)	[___]
7. Self-employed	[___]	8. Other (specify)_____	[___]
9. Home –maker (SKIP TO Q.10)			
88. Don't know (SKIP TO Q. 10)	[___]	99. No response (SKIP TO Q.10)	[___]

7. Do you have a second occupation?

[____]

0. No	[___]	1. Yes	[___]
88. Don't know	[___]	99. No response	[___]

8. In your second occupation are you..?

[____]

1. Full-time *(30 or more hours/week*	[___]	2. Part-time *(29 or fewer hours/week)*	[___]
3. Seasonally employed	[___]	4. Self-employed	[___]
5. Other (specify) _____			
88. Don't know	[___]	99. No response	[___]

9. How many hours per week do you work?

[____]

1. 1-4 hours per week [___] 2. 5-9 hours per week [___]
3. 10-20 hours per week [___] 4. 21-29 hours per week [___]
5. 30+ hours per week[___]
88. Don't know [___] 99. No response [___]

10. What is your current marital status?

[____]

1. Never married [___] 2. Separated [___] 3. Divorced [___]
4. Widowed [___] 5. Visiting [___] 6. Common-law[___]
7. Married [___] 88. Don't know [___] 99. No response [___]

11. Who lives at home with you? *(Tick all that apply)*

Persons who live with respondent:	**Yes [1]**	**No [0]**	**Number(s)**
a.) Father			
b.) Stepfather			
c.) Mother			
d.) Stepmother			
e.) Guardian			
f.) Grandparents/ Great grandparents			
g.) Aunt(s)/Uncle(s)			
h.) Brother(s)			
i.) Sister(s)			
k.) Other Relative(s)			
l.) Other non-relative(s)			
Total no. of persons *(Exclude respondent)*			

12. How many rooms do you have inside your house?
(Put zero if the home does not have that room)

Room	**Yes [1]**	**No [0]**	**Number**
a.) No. of bedrooms			
b.) No. of bathrooms			
c.) No. of kitchens			
d.) Living room			
e.) Dining room			
f.) Study/family room			
g) Other			

13. Are your parents? *(Tick the relevant option)*

[____]

1. Living together most of the time [___] 2. Living separately [___] 3. One of my parents is dead [___]
4. Both of my parents are dead (SKIP to Q.16) [___] 88. Don't Know (SKIP to Q.16) [___] 99. No response (SKIP to Q.16) [___]

14. If living together are your parents?

[____]

1. Married [___] 2. Common-Law [___]
99. No response [___]

15. If living separately are your parents?

[____]

1. Visiting [___] 2. No relationship [___]
99. No response [___]

16. Which of the following possessions do you have in your house?

Item	Yes [1]	No [0]
1. Sewing machine		
2. Gas stove/ Electric stove		
3. Refrigerator or freezer		
4. Microwave oven		
5. Air conditioner		
6. Fan		
7. Telephone		
8. Radio/cassette player		
9. Stereo equipment/component set		
10. Compact Disk/CD player		
11. Video cassette recorder/VCR/DVD		
12. Washing machine		
13. TV set		
14. Cable TV		
15. Satellite dish/DSS		
16. Bicycle		
17. Motorbike		
18. Car, other vehicle		
19. Computer/Printer/Fax, etc.		

17. What type of toilet facilities do you have? *(Tick only one)*

[____]

1. None [___] 2. Hole in the earth [___]
3. Pit latrine, shared with other households [___] 4. Pit latrine, unshared [___]
5. Water closet/flush toilet, shared with other households [___] 6. Water closet/flush toilet unshared with other households [___]
88. Don't know [___] 99. No response [___]

18. What is your main source of water for drinking? *(Tick all relevant options)*

[____]

1. River/Spring [___] 2. Tank/Drum [___]
3. Standpipe [___] 4. Pipe outside of house [___]
5. Pipe inside of house [___] 6. Bottled water [___]
99. No response [___] 88. Don't know [___]

19. If right now you had extra money, what would you do with it?

_____

88. Respondent does not know [___]
99. Non-response [___]

20. How tall are you without your shoes on? |___|___|___|

Unit: ft/ins [ ] metres [ ] cm [ ] *(mark only <u>one</u> relevant unit)*

88. Respondent does not know [___]
99. Non-response [___]

21. How much do you weigh without your shoes on? |___|___|___|
Unit: lbs [ ] kilograms [ ] *(mark only <u>one</u> relevant unit)*

88. Respondent does not know [___]
99. Non-response [___]

B. ABOUT YOU AND SCHOOL

(INTERVIEWER CHECK SECTION A, QS 3&4. IF RESPONDENT IS NOT IN SCHOOL OR AT LEVEL GREATER THAN HIGH SCHOOL, SKIP TO SECTION C)

This next section asks questions about you and your school. We are trying to understand how you feel about different aspects of your school life.

1. In general, how hard do you try on your school work? [____]
   1. I don't try very hard [___]
   2. I try hard enough, but not as hard as I could [___]
   3. I try very hard to do my best [___]
   88. Don't know [___]
   99. No response [___]

2. How well do you do in your school work? [____]
   1. I get grades below most of the children [___]
   2. I get similar grades to most of the children [___]
   3. I get grades above most of the children [___]
   88. Don't know [___]
   99. No response [___]

3. Are you in any club, group or team at school? [____]
   0. No [___]
   1. Yes, sometimes [___]
   2. Yes, often [___]
   88. Don't know [___]
   99. No response [___]

4. Do you like school? [____]
   0. No [___]
   1. Yes, sometimes [___]
   2. Yes, often [___]
   88. Don't know [___]
   99. No response [___]

5. Do you plan to finish high school? [____]
   0. No [___]
   1. Yes [___]
   88. Don't Know [___]
   99. No response [___]

6. In the <u>past year,</u> has a teacher gotten to know you really well? [____]
   0. No [___]
   1. Yes [___]
   88. Don't know [___]
   99. No response [___]

7. Do you get along with your teachers? [____]
   0. No [___]
   1. Somewhat [___]
   2. Yes [___]
   88. Don't know [___]
   99. No response [___]

8. Do you have trouble getting your homework done? [____]
   1. Always [___]
   2. Sometimes [___]
   3 Never [___]
   88. Don't know [___]
   99. No response [___]

9. Do you have trouble reading? [____]
   0. No (SKIP TO Q. 11) [___]
   1. Yes [___]
   88. Don't know [___]
   99. No response [___]

10. If yes, is keeping up with your school work hard because you have trouble reading? [____]
   0. No [___]
   1. Somewhat [___]
   2. Yes [___]
   88. Don't know [___]
   99. No response [___]

11. Have you ever been in any special classes for learning problems? [____]

0.No [___] 1. Yes [___]

88. Don't know [___] 99. No response [___]

12. Have you ever been in any special classes for behaviour problems? [____]

0.No [___] 1. Yes [___]

88. Don't know [___] 99. No response [___]

C. PHYSICAL ACTIVITY MODULE

We are interested in finding out about the kinds of physical activities that people do as part of their everyday lives. The questions will ask you about the time you spent being physically active in the **last 7 days**. Please answer each question even if you do not consider yourself to be an active person. Please think about the activities you do at work, as part of your house and yard work, to get from place to place, and in your spare time for recreation, exercise or sport.

Think about all the **vigorous** activities that you did in the **last 7 days**. **Vigorous** physical activities refer to activities that take hard physical effort and make you breathe much harder than normal. Think *only* about those physical activities that you did for at least 10 minutes at a time.

1. During the **last 7 days**, on how many days did you do **vigorous** physical activities like heavy lifting, digging, running, basketball football, tennis , or fast bicycling?

[___] **days per week**

0. [___] No vigorous physical activities (SKIP TO Q. 3)

2. How much time did you usually spend doing **vigorous** physical activities on one of those days?

[___] **hours per day**

[___][___] **minutes per day**

88. Don't know/Not sure [___] 99. No response [___]

Think about all the **moderate** activities that you did in the **last 7 days**. **Moderate** activities refer to activities that take moderate physical effort and make you breathe somewhat harder than normal. Think only about those physical activities that you did for at least 10 minutes at a time.

3. During the **last 7 days**, on how many days did you do **moderate** physical activities like carrying light loads, bicycling at a regular pace, doubles tennis, ? Do not include walking.

[___] **Days per week**

0. [___] No moderate physical activities (SKIP TO Q. 5)

4. How much time did you usually spend doing **moderate** physical activities on one of those days?

[___] **hours per day**

[___][___] **minutes per day**

88. Don't know/Not sure [___] 99. No response [___]

Think about the time you spent **walking** in the **last 7 days**. This includes at work and at home, walking to travel from place to place, and any other walking that you might do solely for recreation, sport, exercise, or leisure.

5. During the **last 7 days**, on how many days did you **walk** for at least 10 minutes at a time?

   [___] **days per week**

   0. [___] No walking **(**SKIP TO Q. 7)

6. How much time did you usually spend **walking** on one of those days?

   [___] **hours per day**

   [___] **minutes per day**

   88. Don't know/Not sure [___] 99. No response [___]

The last question is about the time you spent **sitting** on weekdays during the **last 7 days**. Include time spent at work, at home, while doing course work and during leisure time. This may include time spent sitting at a desk, visiting friends, reading, or sitting or lying down to watch television.

7. During the **last 7 days**, how much time did you spend **sitting** on a **week day**?

   [___] **hours per day**

   [___] **minutes per day**

88. Don't know/Not sure [___] 99. No response [___]

D. DIETARY BEHAVIOURS MODULE

The next section asks questions about the things you eat. Please try to remember back to what you eat during a usual week, that is, a week when there are not many special occasions.

1. During a usual week, have you ever been hungry because there was not enough your food in home? [____]

   0.No (SKIP TO Q. 3)[___] 1. Yes [___]
   88. Don't know (SKIP TO Q. 3 [___] 99. No response (SKIP TO Q. 3) [___]

2. During a usual week, how often have you gone hungry because there was not enough food in your home? [____]

   1.Never [___] 2. Rarely [___]
   3.Sometimes [___] 4. Most of the time [___]
   5. Always [___]
   88. Don't know [___] 99. No response [___]

3. During a usual week, do you eat any fruit? [____]

   0.No (SKIP TO Q. 5) [___] 1. Yes [___]
   88. Don't know (SKIP TO Q. 5)[___] 99. No response (SKIP TO Q. 5)[___]

4. During a usual week how many times <u>per day</u> do you usually eat fruit? [____]

   0. None [___] 1. Less than 1 time per day[___] 2 1 time per day [___]
   3. 2 times per day [___] 4. 3 times per day[___] 5. 4 times per day[___]
   6.5 or more times per day [___] 88.Don't know [___] 99. No response [___]

5. During a usual week, do you eat any vegetables? [____]

   0.No (SKIP TO Q. 7) [___] 1. Yes [___]
   88. Don't know (SKIP TO Q. 7)[___] 99.Non- response(SKIP TO Q. 7) [___]

6. During a usual week, how many times per day do you usually eat vegetables? [____]

0. None [___] 1. Less than 1 time per day [___] 2.1 time per day [___]

3. 2 times per day [___] 4. 3 times per day [___] 5. 4 times per day [___]

6.5 or more Times per day [___] 88.Don't know [___] 99. No response [___]

7. During a usual week, do you eat pastries such as cake, bulla, and bun? [____]

0.No (SKIP TO Q. 9) [___] 1. Yes [___]

88. Don't know (SKIP TO Q. 9)[___] 99.No response (SKIP TO Q. 9) [___]

8. During a usual week, how many times do you usually eat pastries such as cake, bulla, and bun? [____]

1.Less than one time per week [___] 2. 1 time per week [___]

3.2 times per week [___] 4. 3 times per week [___]

5. 4 times per week [___] 6. 5 or more times per week [___]

88.Don't know [___] 99.Non-response [___]

9. During a usual week, do you eat food at fast food places such as Burger King, Juici Patties, Tastee, Pizza Hut, Kentucky Fried Chicken? [____]

0.No (SKIP TO Q. 11) [___] 1. Yes [___]

88. Don't know (SKIP TO Q. 11)[___] 99.No response (SKIP TO Q. 11) [___]

10. During a usual week, how many times do you eat food at fast food places such as Burger King, Juici Patties, Tastee, Pizza Hut, Kentucky Fried Chicken? [____]

1.Less than one time per week [___] 2. 1 time per week [___]

3. 2 times per week [___] 4. 3 times per week [___]

5. 4 times per week [___] 6. 5 or more times per week [___]

88.Don't know [___] 99.Non-response [___]

11. During a usual week, do you drink sodas, lemonade, Kool Aid, box drinks or other [____] sweet drinks?

0. No (SKIP TO Q. 13) [___] 1. Yes [___]

88. Don't know (SKIP TO Q. 13) [___] 99. No response (SKIP TO Q. 13) [___]

12. During a usual week, how many times do you drink sodas, lemonade, Kool Aid, box other drinks or sweet drinks? [____]

1.Less than one bottle/glass per week [___] 2. 1 bottle/glass per week [___]

3.2-6 bottles/glasses per week [___] 4. 1 bottle/glass per day [___]

5. More than one bottle/glass per day [___]

88. Don't know [___] 99. Non-response [___]

13a.What is the **main** type of oil is used for cooking in your household? (i.e. fry, bake, etc.)|____|

TICK ALL THAT APPLY. *PROMPT*

0.None [___] 1. Vegetable oil (excluding coconut oil) [___]

2.Coconut oil [___] 3. Soft margarine [___]

4. Hard margarine [___] 5.Butter [___]

6.Oil from meat [___] 7.Other [___]

88. Don't know [___] 99. Non-response [___]

13b. What is the **main** brand of oil is used for cooking in your household?

Specify _____ 88. Don't know [___] 99. No response [___]

14a. What type of fat do you use on bread? |____|

TICK ALL THAT APPLY. ***PROMPT***

0. No fat used on bread [___]
1.. Soft margarine [___]
2. Hard margarine [___]
3. Butter [___]
4. Other [___]

(specify)____ _____

88. Don't know [___]
99. Non-response [___]

14b. What brand(s) of fat is used for cooking in your household?

Specify (1) _____

(2) _____

(3)_____

88. Don't know [___] 99. No response [___]

15. What are your main source/s of protein? [____]

TICK ALL THAT APPLY. ***PROMPT***

1. Chicken [___]
2. Beef [___]
3. Pork [___]
4. Fish/Seafood[___] *(including tinned mackerel, saltfish, sardines)*
5. Milk/milk products [___] *(e.g. cow's milk, milk powder, cheese, yogurt,)*
6. Soy products (e.g. tofu, vegemince,[___] soy milk)
7. Peas/beans [___]
7. Other [___]
88. Don't know (SKIP to Q. 17)[___]
99. Non-response (SKIP to Q. 17) [___]

16. How is your main source of protein usually prepared? *(tick only one)*[____]

1. Fry [___]
2. Stew [___]
3. Bake [___]
4. Steam[___]
5. Other [___]

specify _____

88. Don't know [___]
99. Non-response [___]

17. What sweetener/s do you usually use and how many teaspoons do you add to your cup of hot beverage?

MULTIPLE RESPONSES ALLOWED. TICK ALL THAT APPLY.

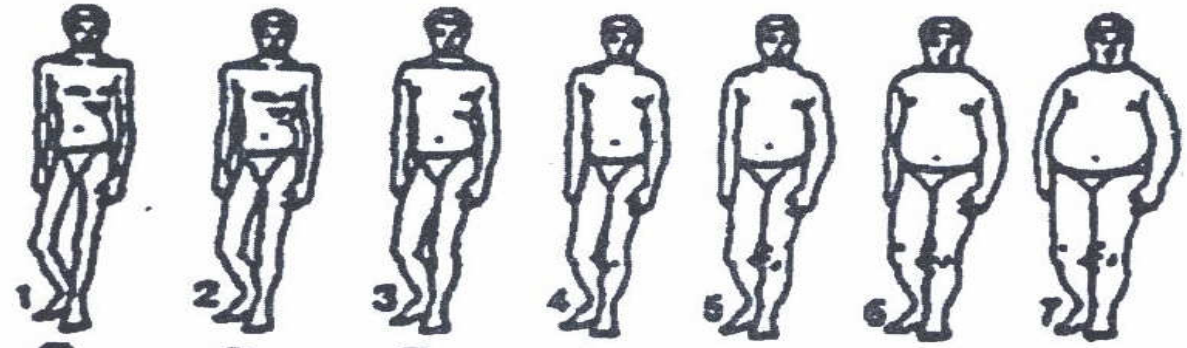
Sweetener	Yes [1]	No [0]	Not Appli-cable [77]	Don't know [88]	No Response [99]	Quantity (no. of tea-spoons)
1. Sugar						
2. Condensed milk						
3. Honey						
4. Creamer						
5. Sugar substitute (Equal, etc)						
6.a. Other						
6.b. Other						

E. PERCEPTION OF SELF

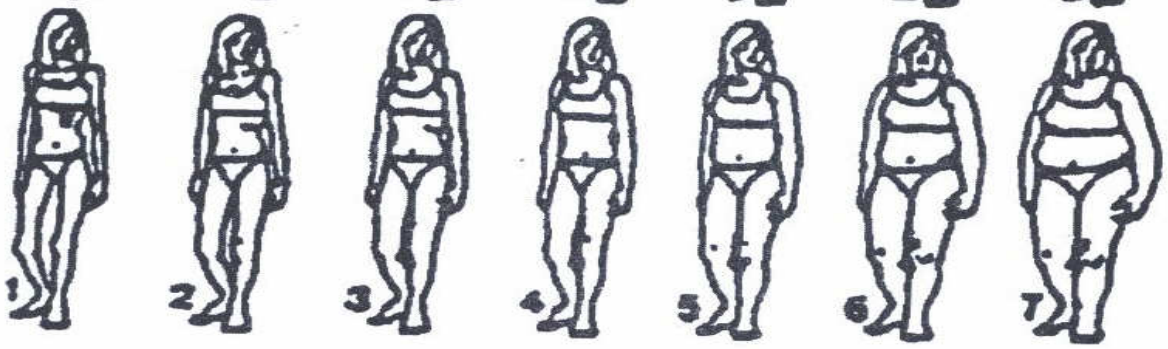
These are drawings of boys and girls your age and older

1. Which of the body types is closest to your body type now? [___] [___][___] [___] [___] [___] [___]
   88. Don't know [___] 99. Non-response [___]

BOYS



GIRLS



2. Which of the body types would you most like to resemble?[___] [___][___] [___] [___] [___] [___]

88.	Don't know [___]	99.	Non-response [___]

3. Tell me all the numbers you think are attractive (*Interviewer, record all numbers)*
   a. Male [___] [___][___] [___] [___] [___] [___]

   88. Don't know [___] 99. Non-response [___]

   b. Female [___][___][___][___][___][___][___]

   88. Don't know [___] 99. Non-response [___]

4. Which one do you think is most healthy? (*Select <u>one</u> for each sex*)
   a.Male |___| [____]
   88. Don't know [___] 99. Non-response [___]

   b. Female |___| [____]
   88. Don't know [___] 99. Non-response [___]

5. When you consider your body weight, do you consider yourself to be? [____]

PROMPT

1.The right weight [___] 2. A little overweight [___]
3.A lot overweight [___] 4. Under-weight [___]
88.Don't know [___] 99. Non-response [___]

F. MEDICAL CARE

1. Have you ever been diagnosed with? [____]

a. Heart Disease 1.[___] No 2.[___] Yes 88.[___] D/K 99.[___] N/R

b. Rheumatic Fever 1.[___] 2.[___] Yes 88.[___] D/K 99.[___] N/R

c. Diabetes Mellitus (sugar) 1.[___] No 2.[___] Yes 88.[___] D/K 99.[___] N/R

d. Sickle Cell Disease 1.[___] No 2.[___] Yes 88.[___] D/K 99.[___] N/R

e. Sickle Cell Trait 1.[___] No 2.[___] Yes 88.[___] D/K 99.[___] N/R

f. Stroke 1.[___] No 2.[___] Yes 88.[___] D/K 99.[___] N/R

g. High Blood Pressure 1.[___] No 2.[___] Yes 88.[___] D/K 99.[___] N/R

h. High Cholesterol 1.[___] No2.[___] Yes 88.[___] D/K 99.[___] N/R

i. Obesity/Overweight 1.[___] No 2.[___] Yes 88.[___] D/K 99.[___] N/R

j. Asthma/Wheezing 1.[___] No 2.[___] Yes 88.[___] D/K 99.[___] N/R

k. Bronchitis 1.[___] No 2.[___] Yes 88.[___] D/K 99.[___] N/R

l. Kidney Disease 1.[___] No 2.[___] Yes 88.[___] D/K 99.[___] N/R

m. Pneumonia/Bronchitis 1.[___] No 2.[___] Yes 88.[___] D/K 99.[___] N/R

n. Broken bones/fractures 1.[___] No 2.[___] Yes 88.[___] D/K 99.[___] N/R

2. Are you taking any medication/medicine/tablets on a regular basis? [____]

0.No [___] 1. Yes [___]
88. Don't know [___] 99. No response [___]

3. If yes, please give names of the medication and the condition for which the medication is being taken

_____

4. Where do you usually go for medical care? [____]

1.Nowhere [___] 2. Public clinic [___]
(health centre, health post, polyclinic)
3.Hospital [___] 4. Private doctor [___]
5. Dispensary [___] 6.Traditional healer/herbalist/ bush doctor/obeah man [___]
88.Don't know [___] 99.Non-response [___]

5. When did you last……?
NOTE TO INTERVIEWER, CIRCLE THE NUMBER OF THE RESPONSE INDICATED

		Never	Over 2 yrs ago	1 – 2 yrs ago	Less than 1 yr	Don't Know	No Response
5a.	Have a check up	1	2	3	5	88	99
5b.	Have your hearing checked	1	2	3	5	88	99
5c.	Have your eyes checked	1	2	3	5	88	99
5d.	See a dentist	1	2	3	5	88	99
5e.	Get counselling or mental health services	1	2	3	5	88	99
5f.	**Girls :** Have a vaginal exam	1	2	3	5	88	99

6. Approximately how often do you usually see a doctor? [____]
1.< Once per year [___] 2. 1-2 times/year [___]
3.3-4 times /year [___] 4. < four times/year [___]
88. Don't know [___] 99.Non-response [___]

7. Have you ever been admitted to hospital? [____]
1.No (SKIP TO Q. 9) [___] 2. Yes [___]
88.Don't know (SKIP TO Q. 9) [___] 99.No response (SKIP TO Q. 9)[___]

8. How many times have you been admitted to hospital? [____]
|___|___| no. times admitted

9. Do you think the following statements are true?
NOTE TO INTERVIEWER, CIRCLE THE NUMBER OF THE RESPONSE INDICATED

		Yes	No	Don't Know	No Response
9a.	If you tell a doctor something personal, others will find out	1	2	88	99
9b.	If you tell a nurse something personal, others at the clinic will find out	1	2	88	99
9c.	If you tell a peer counsellor something personal, other people will find out	1	2	88	99
9d.	If you tell your friend something personal, other friends will find out	1	2	88	99
9e.	If you tell your parents something personal, others in the neighbourhood will find out	1	2	88	99

GIRLS ONLY. *BOYS SKIP TO Q. 12*

10. Have you started seeing your menstrual period? [____]
1.No [___] 2. Yes [___]
88. Don't know [___] 99. No response [___]

11. How long has it been since you had your last pap smear? ***PROMPT*** [____]
(IF ASKED FOR CLARIFICATION INTERVIEWER TO SPECIFY THAT A PAP SMEAR

IS SCRAPING THE NECK OF THE WOMB)

1.Less than 1 year [___] 2. 1-2 years [___]
3.3 or more years [___] 4. Never had a pap smear [___]
5. Has had a hysterectomy [___]
88. Don't know [___] 99.Non-response [___]

12a.Are you taking any vitamin supplements? [____]

1.No [___] 2. Yes [___]
88.Don't know [___] 99.No response [___]

12b. What brand(s) *(specify)*

_____

13aAre you taking any iron supplements? [____]

1.No [___] 2. Yes [___]
88. Don't know) [___] 99. No response [___]

13b.What brand(s) *(specify)*

_____

14. What is the main source from which/whom you learned to take care of your teeth and gums? [____]

1. Dentist/School [___] 2.Health Worker [___] 3. School talk [___]
Nurse
4. TV [___] 5.Radio [___] 6. Posters/magazines [___]
newspapers
7. Parent/Family [___] 8.Other [___] 0.No source [___]
member specify _____
88. Don't know [___] 99. Non-response [___]

15. When you brush or floss your teeth do you ever notice that your gums bleed? [____]

0.No [___] 1. Yes [___]
88. Don't know [___] 99. No response [___]

G. EMOTIONS & MENTAL HEALTH MODULE

This next section asks you questions about how you feel at certain times. Remember that everything you tell us will be kept private and your name will not be associated with your responses.

1. During the past 12 months, how often have you felt lonely/sad/ or wanted to cry? [____]

1.Never [___] 2. Rarely [___]
3Sometimes [___] 4. Most of the time [___]
5.Always [___]
88. Don't know [___] 99. No response [___]

2. During the past 12 months, how often have you been so worried about something that you could not sleep properly at night? [____]

1.Never [___] 2. Rarely [___]
3Sometimes [___] 4.Most of the time [___]
5.Always [___]
88.Don't know [___] 99.No response [___]

3. During the past 12 months, did you ever feel so sad or hopeless almost every day for or [____] two weeks more in a row that you stopped doing your usual activities?

0.No [___] 1. Yes [___]
88.Don't know [___] 99.No response [___]

4. During the past month, most of the time, have you been bothered by feeling down,[____]

depressed or hopeless?

0.No [___] 1. Yes [___]
88.Don't know [___] 99.No response [___]

5. During the past month, most of the time, have you been bothered by little interest or pleasure in doing things? [____]

0.No [___] 1. Yes [___]
88. Don't know [___] 99. No response [___]

6. During the past month have you had a change in appetite? [____]

0.No [___] 1. Yes [___]
88. Don't know [___] 99. No response [___]

7. During the past month have you had a change in sleeping pattern? [____]
(sleeping more or less than usual)

0.No [___] 1. Yes [___]
88. Don't know [___] 99. No response [___]

8. During the past month have you been feeling guilty or worthless? [____]

0.No [___] 1. Yes [___]
88. Don't know [___] 99. No response [___]

9. During the past 12 months, did you ever seriously consider attempting suicide? [____]

0.No [___] 1. Yes [___]
88.Don't know [___] 99. No response [___]

10. Have you ever tried to commit suicide? [____]

0.No (SKIP TO Q. 12) [___] 1. Yes [___]
88. Don't know (SKIP TO Q. 12)[___] 99.No response (SKIP TO Q. 12) [___]

11. When was the last time you tried to commit suicide? [____]

1.I have never tried to commit suicide[___] 2. I tried within the last 6 months [___]
3I tried within the last 12 months [___] 4.I have tried more than 12 months ago [___]
88.Don't know [___] 99.No response [___]

12. During the past 12 months, did you make a plan about how you would attempt suicide?[____]

0.No [___] 1. Yes [___]
88. Don't know [___] 99. No response [___]

13. Has anyone in your family ever tried to commit suicide? [____]
(if respondent says response 1 and 2, tick <u>both</u> responses)

0.No [___] 1. Yes, and they lived [___]
2.Yes, and they died [___]
88. Don't know [___] 99. No response [___]

14. Has any of your friends ever tried to kill themselves? [____]
(if respondent says response 1 and2,tick <u>both</u> responses)

0. No [___] 1. Yes, and they lived [___]
2. Yes, and they died [___]
88. Don't know [___] 99. No response [___]

15. How many close friends do you have? [____]

1. None [___] 2. One [___]
3 Two [___] 4. Three or more [___]
88. Don't know [___] 99. No response |___]

16. Do you feel that your friends influence you in any way? [____]

1.Yes, they have a strong influence [___] 2.Yes, they influence me somewhat [___]

3Yes, they have a slight influence [___] 4.No, they don't have any influence at all [___] (SKIP TO Q.18)

88.Don't know (SKIP TO Q. 18) [___] 99.No response (SKIP TO Q. 18) [___]

17. What kind of influence do your close friends have on you? [____]

1.A good influence [___] 2. Neither a good influence nor a bad influence [___]

3 Both a good and bad influence [___] 4.A bad influence [___]

88. Don't know [___] 99. No response [___]

18. During the past 12 months how often...

NOTE TO INTERVIEWER, CIRCLE THE NUMBER OF THE RESPONSE INDICATED

		Never	Rarely	Some of the time	Most of the time	Always	Don't Know	No Res-ponse
18a.	Have you felt irritable?	1	2	3	4	5	88	99
18b.	Have you felt angry?	1	2	3	4	5	88	99
18c.	Have you felt happy	1	2	3	4	5	88	99

19. During the last 12 months did you worry about……*NOTE TO INTERVIEWER, CIRCLE THE NUMBER OF THE RESPONSE INDICATED*

		Not at all	Some times	A lot	Not Appli-cable	Don't know	No Res-ponse
19a.	Your own drinking and drug abuse	1	2	3	77	88	99
19b.	Your mother's or father's drinking or using drugs	1	2	3	77	88	99
19c.	The drinking and drug use in your community	1	2	3	77	88	99
19d.	Being physically abused	1	2	3	77	88	99
19e.	Being sexually abused	1	2	3	77	88	99
19f.	All the violence you see in your home	1	2	3	77	88	99
19g.	The violence in your community	1	2	3	77	88	99
19h.	Getting or making someone pregnant	1	2	3	77	88	99
19i.	Getting AIDS	1	2	3	77	88	99
19j.	Being treated unfairly because of your race or religion	1	2	3	77	88	99
19k.	Your parents leaving you	1	2	3	77	88	99
19l.	Getting a job when you are older	1	2	3	77	88	99
19m.	Passing exams	1	2	3	77	88	99

20. Do you ever think about hurting or killing someone? [____]

1.Never [___] 2. Sometimes [___]

3All the time [___]

88.Don't know [___] 99. No response [___]

21. Do you think you'll live to be at least 25 years old? [____]

0. No [___] 1. Yes [___]

88. Don't know [___] 99. No response [___]

22. If you had to move into some other neighbourhood how happy or unhappy would you be[____]

1.Very unhappy [___] 2. Unhappy [___]

3It makes no difference [___] 4.Happy [___]
5.Very happy [___]
88.Don't know [___] 99.No response [___]

H. RESILIENCY MODULE

The following questions ask you about things that happen at school, in your community or at home. Please think back to the last month and try to answer the questions honestly.
(INTERVIEWER CHECK SECTION A, QS 3&4. IF RESPONDENT IS NOT IN SCHOOL OR AT LEVEL GREATER THAN HIGH SCHOOL, SKIP TO Q.3 IN THIS SECTION)

1. During the past 30 days, on how many days did you miss classes or school without or permission without your parent's/guardian's knowledge? [____]

0. 0 days [___] 1.1 or 2 days [___] 2. 3 to 5 days [___]
3. 6 to 9 days [___] 4.10 or more days [___] 5. Not currently in school (SKIP TO Q. 3) [___]
77. Not applicable (SKIP TO Q. 3) *– no contact with parents or guardians* [___] 88. Don't know [___] 99. Non-response[___]

2. During the past 30 days, how often did your parents or guardians check to see if your homework was done? [____]

1.Never [___] 2. Rarely [___]
3Sometimes [___] 4.Most of the time[___]
5.Always [___] 77. Not applicable – no contact with parents or guardians [___]
88.Don't know [___] 99.No response [___]

3. During the past 30 days, how often did your parents or guardians understand your problems and worries? [____]

1.I don't have any worries [___] 2. Never discussed my problems/worries with them [___]
3. Never [___] 4. Rarely [___]
5.Sometimes [___] 6. Most of the time [___]
7.Always 77. Not applicable – no contact with parents or guardians[___]
88.Don't know [___] 99. No response [___]

4. During the past 30 days, did your parents/guardians know what you were doing with your free time? [____]

0.No [___] 1. Yes, sometimes [___]
2.Yes, always [___] 77. Not applicable – no contact with parent or guardians[___]
88.Don't know [___] 99. No response [___]

5. How often do your parents/guardians know where you are? [____]

1. Never [___] 2. Rarely [___]
3 Sometimes [___] 4. Most of the time [___]
5. All of the time ___] 77. Not applicable – no contact with parents or guardians[___]
88. Don't know [___] 99. No response [___]

6. In a typical month, how often do you participate in fun/recreation in the evenings? [____]

1. None at all [___] 2. One evening [___] 3. Two evenings[___]
4. Three evenings [___] 5. Four evenings [___] 6. Five or more evenings [___]
88. Don't know [___] 99. Non-response [___]

7. How many evenings a week do you go out, that is leave the house, for fun/recreation (for example to the movies)? [____]

1. None at all [___] 2. Less than one [___] 3. One evening [___]
4. Two evenings [___] 5. Three evenings [___] 6. Four evenings [___]
7. Five or more [___] 88. Don't know [___] 99. Non-response [___]

8. How many hours of television do you watch on an average week day? [____]
1.Less than 1 hour per day [___] 2. 1 to 2 hours per day [___]
3.3 to 4 hours per day [___] 4.5 to 6 hours per day [___]
5..7 to 8 hours per day [___] 6.More than 8 hours per day [___]
88. Don't know [___] 99.No response [___]

9. How many hours of television do you watch on a weekend day? [____]
1.Less than 1 hour per day [___] 2. 1 to 2 hours per day [___]
3.3 to 4 hours per day [___] 4.5 to 6 hours per day [___]
5.7 to 8 hours per day [___] 6.More than 8 hours per day [___]
88. Don't know [___] 99.No response [___]

10. What is your religious affiliation? [____**PROMPT IF NECESSARY**
0. None (SKIP TO Q. 12) [___] 1. Roman Catholic [___]
2. United Church of Jamaica *(Presbyterian, Congregational, Disciples of Christ)* [___] 3. Seventh Day Adventist [___]
4. Methodist [___] 5. Anglican [___]
6. Baptist [___] 7. Church of God [___]
8. Pentecostal [___] 9. Other Christian [___]
(specify) _____
10. Rastafarian [___] 11. Muslim [___]
12. Jewish [___] 13. Other Religion [___]
(specify) _____
88. Don't know [___] 99. No response [___]

11. How often have you attended a religious service in the past month? [____]
1.More than once a week [___] 2. Weekly or almost weekly [___]
3.Once or twice in the past 30 days [___] 4. Occasionally [___]
5.Never [___]
88.Don't know [___] 99. No response [___]

For the following questions, please think about how true the following questions are. The response options are: never true, rarely true, sometimes true, often true, and always true. *(Refer to response card that can be shown to participant)*

12. In your home, there is an adult who …
NOTE TO INTERVIEWER: CIRCLE THE NUMBER REPRESENTING THE RESPONSE

		Never True	**Rarely true**	**Some-times True**	**Often True**	**Always True**	**Don't Know**	**No response**	**This adult is** *(see code below)*
12a.	Expects you to follow the rules	1	2	3	4	5	88	99	
12b	Believes that you will be a success	1	2	3	4	5	88	99	
12c.	Is too busy to pay much attention to you	1	2	3	4	5	88	99	
12d.	Talks with you about your problems	1	2	3	4	5	88	99	
12e.	Always wants you to do your best	1	2	3	4	5	88	99	
12f.	Listens to you when you have something to say	1	2	3	4	5	88	99	

Code

1. Father	2. Mother
3. Stepfather	4. Stepmother
5. Guardian	6. Brother
7. Sister	8. Uncle
9. Aunt	10. Cousin
11. Grandfather	12. Grandmother
13. Other	

13. Outside of your home (i.e. *school, community, other)* , there is an adult who …
Note to interviewer: Circle the number representing the response

		Never True	**Rarely true**	**Some-times True**	**Often True**	**Always True**	**Don't Know**	**No respon se**	**This adult is** (see code above)
13a.	Who really cares about you?	1	2	3	4	5	88	99	
13b.	Who tells you when you do a good job?	1	2	3	4	5	88	99	
13c.	Who notices when you're not there	1	2	3	4	5	88	99	
13d.	Who always wants you to do your best?	1	2	3	4	5	88	99	
13e.	Who listens to you when you have something to say?	1	2	3	4	5	88	99	
13f.	Who believes that you will be a success?	1	2	3	4	5	88	99	
13g.	Who notices when you're upset about something	1	2	3	4	5	88	99	
13h.	Who you trust	1	2	3	4	5	88	99	

14. Outside of your home, there is an adult who is mean to you [____]

1.Never true [___] 2. Rarely true [___]
3Sometimes true [___] 4.Often True [___]
5.Always true [___]
88.Don't know [___] 99. No response [___]

15. This adult is ……. (*Tick all that apply*)

Adult outside of home who is mean to you	
1. Father	
2. Mother	
3. Step-father	
4. Step-mother	
5. Guardian	
6. Brother	
7. Sister	
8. Uncle	
9. Aunt	
10. Cousin	
11. Grandfather	
12. Grandmother	
13. Someone in my community	
14. Pastor	
15. Doctor	
16. Friend	
17. Family Friend	
18. Other _____(specify)	
19. No-one/Not applicable	
99. Non-response	

16. Which of the following is usually present in your community?
Note to interviewer, Circle the number of the response indicated

		Yes	No	Don't Know	No Response
16a.	Garbage on the street or the sidewalk	1	2	88	99
16b.	Graffiti painted on the walls	1	2	88	99
16c.	Abandoned cars	1	2	88	99
16d.	Unemployed youth on the street	1	2	88	99
16e.	Gangs on the street	1	2	88	99
16f.	Prostitutes or sex workers	1	2	88	99
16g.	Gunmen	1	2	88	99
16h.	People selling drugs	1	2	88	99
16i.	People using drugs	1	2	88	99

I. VIOLENCE AND UNINTENTIONAL INJURIES MODULE

The following questions ask about your involvement in violence and accidents. Remember that the information you provide to us is confidential and your name will not be associated with your answers. This information is very important, so please try to answer honestly.

1. Have you ever been physically abused or mistreated by anyone in your family or anyone else? *(Physical abuse is when someone causes you to have a scar, black and blue marks, welts, bleeding or a broken bone).* [____]
   0.No [I have NOT been physically abused] (SKIP TO Q. 3) [___] 1. Yes [___]
   88.Don't know (SKIP TO Q. 3) [___] 99.No response (SKIP TO Q. 3) [___]

2. Who was the person(s). *(Tick all that apply*) [____]

1.	An adult who lives with me	
2.	Another adult who does not live with me	
3.	A brother, sister or another teenager who lives with me	
4.	A boyfriend, girlfriend or another teenager who does NOT live with me	
88.	Don't know	
99.	No response	

3. During the past 12 months, have you been the victim of a physical attack or fight? [____]
   0.No (SKIP TO Q. 5) [___] 1. Yes [___]
   88.Don't know (SKIP TO Q. 5) [___] 99. No response (SKIP TO Q. 5)[___]
4. If yes, how many times in the past 12 months? [____]
   1. 1 time [___] 2. 2 or 3 times [___]
   3 4 or 5 times [___] 4. 6 or 7 times [___]
   5. 8 or 9 times [___] 6. 10 or 11 times [___]
   7. 12 or more times[___]
   88. Don't know [___] 99. No response [___]

5. During the past 12 months, have you been the perpetrator of a physical attack or fight [____] *(that is, have you been the one to cause the fight)?*
   0. No (SKIP TO Q. 7) [___] 1. Yes [___]
   88. Don't know (SKIP TO Q. 7)[___] 99. No response (SKIP TO Q. 7) [___]
6. If yes, how many times in the past 12 months? [____]
   1.1 time [___] 2. 2 or 3 times [___]
   3.4 or 5 times [___] 4.6 or 7 times [___]
   5.8 or 9 times [___] 6. 10 or 11 times [___]
   7.12 or more times[___]
   88. Don't know [___] 99. No response [___]

The next 4 questions ask about the most serious injury that may have happened to you during the past 12 months. An injury is serious when it makes you miss at least one full day of usual activities (such as school, sports, or a job) or requires treatment by a doctor or nurse.

7. During the past 12 months, have you had any serious injury? [____]
   0. No (SKIP TO Q. 13) [___] 1. Yes [___]
   88. Don't know (SKIP TO Q. 13) [___] 99. No response (SKIP TO Q. 13) [___]

8. If yes, how many times in the past 12 months? [____]
   1. 1 time [___] 2. 2 or 3 times [___]
   3 4 or 5 times [___] 4. 6 or 7 times [___]
   5. 8 or 9 times[___] 6. 10 or 11 times[___]
   7. 12 or more times [___]
   88. Don't know [___] 99. No response [___]

9. During the past 12 months, what were you doing when the most serious injury happened to you?
   INTERVIEWER, DO NOT READ RESPONSES
   1.Playing or training for a sport [___] 2. Walking or running, but not as part of playing or training for a sport [___]
   3.Riding a bicycle, scooter or skating [___] 4.Riding or driving in a car or other motor vehicle [___]
   5.Doing any unpaid work, including housework, yardwork, or cooking [___] 6. Nothing [___]
   7.Something else [___]
   (specify)_____
   88.Don't know [___] 99. No response [___]

10. During the past 12 months, what was the major cause of the most serious injury that [____] happened to you?
    INTERVIEWER, DO NOT READ RESPONSES
    1.I was attacked, assaulted or abused by someone [___] 2. I was fighting with someone [___]
    3I was in a fire or too near a flame or something hot [___] 4.I was in a motor vehicle accident or hit by a motor vehicle [___]
    5.I fell [___] 6. Something fell on me or hit me [___]
    7.Something else caused my injury [___]
    (specify)_____
    88.Don't know [___] 99. No response [___]

11. During the past 12 months, how did the most serious injury happen to you? [____]
    INTERVIEWER, DO NOT READ RESPONSES
    1.Someone else hurt me on purpose [___] 2. I hurt myself on purpose [___]
    3.Someone else hurt me by accident [___] 4.I hurt myself by accident [___]
    88.Don't know [___] 99. No response [___]

12. During the past 12 months, what was the most serious injury that happened to you? [____]
    INTERVIEWER, DO NOT READ RESPONSES
    1.I had a concussion or other head or neck injury, was knocked out or could not breathe [___] 2. I lost all or part of a foot, leg, hand or arm [___]
    3I had a gunshot wound [___] 4.I had a bad burn [___]
    5.I had a cut, puncture or stab wound [___] 6. I had a broken bone or dislocated joint [___]
    7.Something else happened to me
    (specify) _____
    88.Don't know [___] 99.Non- response [___]

13. During the past 30 days have you been teased/bullied? [____]
    0.No (SKIP TO Q. 15) [___] 1. Yes [___]
    88.Don't know (SKIP TO Q. 15) [___] 99.No response (SKIP TO Q. 15) [___]

14. During the past 30 days, how were you teased/bullied most often? [____]

INTERVIEWER, <u>DO NOT READ RESPONSES</u>

1.I was hit, kicked, pushed, shoved or locked indoors. [___]
2. I was made fun or because of my race or colour or religion [___]
3I was made fun of with sexual jokes, comments, or gestures [___]
4.I was left out of activities on purpose or completely ignored [___]
5.I was made fun of because of how my body or face looks [___]
6. I was bullied in some other way (specify) _____ [___]
88. Don't know [___]
99. Non- response [___]

15. Have you ever been threatened with a knife, a gun, or some other weapon that made you afraid to leave your house? [____]

0. No (SKIP TO Q. 17) [___]
1. Yes [___]
88. Don't know (SKIP TO Q. 17) [___]
99. No response (SKIP TO Q. 17) [___]

16. Where did these threats happen? *(Tick all that apply)* [____]

1. At school [___]
2. In your neighbourhood [___]
3. At a store [___]
4. At a health facility [___]
5. In a public area where kids spend time [___]
6. Other [___] (specify) _____
88. Don't know [___]
99. Non-response [___]

17. How often have you done any of the following during the past 12 months?
(NOTE TO INTERVIEWER: CIRCLE THE NUMBER OF THE RESPONSE INDICATED)

		Never	1 or 2 times	3 or more times	Don't know	No Response
17a.	Cheated on a test	1	2	3	88	99
17b.	Deliberately damaged something that didn't belong to you	1	2	3	88	99
17c.	Been in a fight where weapons were used	1	2	3	88	99
17d.	Took something from a store without paying for it	1	2	3	88	99
17e.	Stole something from someone	1	2	3	88	99
17f.	Went somewhere to steal something	1	2	3	88	99
17g.	Ran away from home	1	2	3	88	99

18. During the past 30 days, did you carry a weapon such as a gun, knife, club, stick or bat? [____]

1.Never (SKIP TO Q.20) [___]
2. A few times [___]
3 Almost all of the time [___]
88. Don't know (SKIP TO Q.20) [___]
99. No response (SKIP TO Q. 20) [___]

19. During the past 30 days, what kind of weapon did you carry most often? [____]

1.A handgun [___]
2. Other guns such as a rifle or shot gun [___]
3A knife, razor, ice-pick or machete [___]
4.A club, stick, bat or pipe [___]
6.Other_____
88. Don't know [___]
99. Non- response [___]

20. Have you ever belonged to a gang? [____]

0.No [___]
1. Yes, but not anymore [___]
2.Yes, I still do [___]
88.Don't know [___]
99. No response [___]

21. Have you ever been stabbed or shot? [____]

0.No (SKIP TO Q. 23) [___]
1. Yes [___]
88.Don't know (SKIP TO Q. 23)[___]
99. No response (SKIP TO Q. 23)[___]

22. How many times have you been stabbed or shot? [____]

1.Never	[___]	2. Once	[___]
3Twice	[___]	4. 3 or more times	[___]
88.Don't know	[___]	99. No response	[___]

23. Have you ever seen a dead body (other than at a funeral)? [____]

0.No (SKIP TO NEXT SECTION)	[___]	1. Yes	[___]
88.Don't know	[___] (SKIP TO NEXT SECTION)	99. No response	[___] (SKIP TO NEXT SECTION)

24. How many times have you seen a dead body? [____]

|___|___| Times

88.	Don't know [___]	99.	No response [___]

25. What caused the person's/persons' death? (*Tick all that apply*)

1.	was sick and died	
2.	motor vehicle accident	
3.	Beaten to death	
4.	stabbed and killed	
5.	shot and killed	
6. other_____		
88.	Don't know	
99.	No response	

J. ALCOHOL, TOBACCO & DRUG USE MODULE

This next section asks about alcohol and drug use. For these questions, when we refer to a drink, we mean a drink that contains alcohol such as beer, *Smirnoff Ice*, stout, and wine. **Drinking alcohol does not include small tastes or sips**. If you are unsure of whether a drink contains alcohol, feel free to ask me.

1.In your entire life have you had at least 1 drink of any kind of alcohol, not counting small tastes or sips? [____]

0.	No (SKIP TO Q.5 AND MARK AS LIFETIME ABSTAINER) [___]	1. Yes	[___]
88.	Don't know [___]	99.	No response [___]

2. About how old were you when you first started drinking, not counting small tastes of sips of alcohol? [____]

1.7 years old or younger	[___]	2. 8 or 9 years old	[___]
3.10 or 11 years old	[___]	4.12 or 13 years old	[___]
5.14 or 15 years old	[___]	6. 16 years old or older	[___]
88. Don't know	[___]	99.No response	[___]

3. During the last 12 months did you have a total of at least 12 drinks of any kind of alcohol? [____]

0.No	[___]	1. Yes	(SKIP TO Q.5 AND MARK AS A CURRENT DRINKER) [___]
88. Don't know	[___]	99.	No response [___]

4. During the last 12 months did you have at least 1 drink of any kind of alcohol? [____]

0.No (GO TO Q.5 AND MARK AS AN EX-DRINKER)	[___]	1. Yes	(GO TO Q.5 AND MARK AS A CURRENT DRINKER) [___]
88. Don't know	[___]	99.	No response [___]

5. Tick **only one** [____]

1.Current Drinker [___]
2. Ex-drinker (SKIP TO Q. 21) [___]
3.Lifetime Abstainer (SKIP TO Q. 21)[___]

The next few questions are about the type and frequency of drinks you have consumed in the last 12 months

6. During the last 12 months, did you drink any of the following?

	No [1]	**Yes [2]**	**Don't Know [88]**	**No Response [99]**
6a. Premixed alcoholic coolers (such as *Smirnoff Ice, Bacardi Breathers*, *Shandy*)				
6b. Beer or Stout				
6c. Wine				
6d. Liquor *(including whiskey, rum, gin, vodka, bourbon,scotch, mixed drinks and liqueurs <u>but excluding premixed alcoholic coolers,</u> mentioned previously)*				
6e. ANY alcoholic beverage *(all types of alcoholic beverages combined, including any types not mentioned before)*				

7. During the last 12 months how often did you drink the following?

	Premixed Alcoholic Coolers [7a.]	**Beer or Stout [7b.]**	**Wine [7c.]**	**Liquor [7d.]**	**Any Alcoholic Beverage [7e.]**
1. Every day					
2. Nearly every day					
3. 3 to 4 times a week					
4. 2 times a week					
5. Once a week					
6. 2 to 3 times a month					
7. Once a month					
8. 7 to 11 times in the last year					
9. 3 to 6 times in the past year					
10. 1 or 2 times in the last year					
77. Never/Not Applicable					
88. Don't know					
99. Non-response					

8. About how often during the last 12 months did you drink **FIVE OR MORE** of the following **in a single day**?

	Premixed Alcoholic Coolers [8a.]	**Beer or Stout [8b.]**	**Wine [8c.]**	**Liquor [8d.]**	**Any Alcoholic Beverage [8e.]**
1. Every day					
2. Nearly every day					
3. 3 to 4 times a week					
4. 2 times a week					

	Premixed Alcoholic Coolers [8a.]	Beer or Stout [8b.]	Wine [8c.]	Liquor [8d.]	Any Alcoholic Beverage [8e.]
5. Once a week					
6. 2 to 3 times a month					
7. Once a month					
8. 7 to 11 times in the last year					
9. 3 to 6 times in the past year					
10. 1 or 2 times in the last year					
77. Never/Not Applicable					
88. Don't know					
99. Non-response					

9. During the last 12 months, did you USUALLY drink any of the following?

	No [1]	Yes [2]	Not Applicable [77]	Don't Know [88]	Non-response [99]
Premixed Alcoholic Coolers					
9a. Wine coolers					
9b. Malt-based coolers (e.g. *Shandy*)					
9c. Liquor-based coolers (e.g. *Smirnoff Ice, Bacardi Breathers*)					
9d. Pre-packaged cocktails/mixed drink					
Beers					
9e. Regular beer (e.g. *Red Stripe*, *Heinekin)*					
9f. Malt liquor (e.g. *Guinness*, or *Dragon Stout)*					
9g. Lite or reduced calorie beer (e.g. *Red Stripe Lite)*					
9h. Ice beer					
Liquor					
9i. 80-proof liquor/brandy					
9j. 100-proof liquor					
9k. Liqueurs or cordials (*Sangsters Rum Cream, Mudslides, Baileys Rum Cream*)					

10. Counting all types of alcohol combined, how many drinks did you **usually** have on days[____] when you drank during the last 12 months?
|____|____| Number

11. During the past 12 months what was the **LARGEST** number of drinks that you drank in [____] a single day?
|____|____| Number

12. During the past 12 months did you drink so much alcohol that you were drunk? [____]
0.No (SKIP TO Q. 14) [___] 1. Yes [___]
88.Don't know (SKIP TO Q. 14) [___] 99. No response (SKIP TO Q. 14) [___]

13. During the last 12 months, about how often did you drink enough to feel intoxicated or[____]
drunk, that is, when your speech was slurred, you felt unsteady on your feet or you had blurred vision?
1. Every day [___] 2.Nearly every day [___] 3. 3 or 4 times a week [___]
4. 2 times a week [___] 5.Once a week [___] 6. 2 to 3 times a month [___]
7. Once a month [___] 8.7 to 11 times in the last year [___] 9. 3 to 6 times in the last year [___]
10.1 or 2 times in the last year [___] 11.Never in the last year [___]
88. Don't know [___] 99. Non-response [___]

14. During the past 12 months, how many times have you ever …

NOTE TO INTERVIEWER: CIRCLE THE NUMBER REPRESENTING THE RESPONSE

		0 times	1-2 times	3-9 times	10 or more times	Don't know	No resp.
14a.	Had a hang over?	1	2	3	4	88	99
14b.	Felt sick after drinking?	1	2	3	4	88	99
14c.	Got into trouble with family as a result of drinking?	1	2	3	4	88	99
14d.	Got into trouble with friends as a result of drinking?	1	2	3	4	88	99
14e.	Missed school as a result of drinking?	1	2	3	4	88	99
14f.	Got into fights as a result of drinking?	1	2	3	4	88	99

15. During the last 12 months how often did you drive another car or another motor vehicle[____]
such as a motorcycle, boat, jet ski or skimobile after having had 3 or more drinks?
1. Every day [___] 2. Nearly every day[___] 3. 3 or 4 times a week [___]
4. 2 times a week[___] 5. Once a week [___] 6. 2 to 3 times a month [___]
7. Once a month [___] 8. 7 to 11 times in the last year [___] 9. 3 to 6 times in the last year [___]
10. 1 or 2 times in the last year[___] 11. Never in the last year [___]
88. Don't know [___] 99. Non-response [___]

16. How many drinks can you have **WITHOUT** feeling intoxicated or drunk? [____]
|____|____| Number

88. Don't know [___] 99. Non-response [___]

17. During the past 30 days have you consumed drinks containing alcohol? [____]
0. No (SKIP TO Q. 21) [___] 1. Yes [___]
88. Don't know (SKIP TO Q. 21)[___] 99. No response (SKIP TO Q. 21) [___]

18. During the past 30 days, on how many days did you have at least one drink containing [____]
alcohol?
1. 0 days [___] 2. 1 or 2 days [___] 3. 3 to 5 days [___]
4. 6 to 9 days [___] 5. 10 to 19 days ___] 6. 20 to 29 days [___]
7. All 30 days[___] 88. Don't know [___] 99. Non-response [___]

19. During the past 30 days, on the days you drank alcohol, how many drinks did you usually [____]
drink per day?
1. Less than 1 drink[___] 2. 1 drink [___] 3. 2 drinks [___]
4. 3 drinks [___] 5. 4 drinks [___] 6. 5 or more drinks [___]
88. Don't know [___] 99. Non-response

[___]

20. During the past 30 days, how did you usually get the alcohol you drank? [____]

SELECT ONLY ONE RESPONSE.

1.I bought it in a store, shop, or from a street vendor [___]
2. I gave someone else money to buy it for me [___]
3.I got it from my friends [___]
4. I got it from home [___]
5.I stole it [___]
6. I got it some other way [___]
7.Other [___]
88. Don't know [___]
99. No response [___]

Now I am going to ask you some questions about smoking

21. Have you ever smoked a cigarette even just a puff? [____]

0. No (SKIP TO Q. 26) [___]
1. Yes [___]
88. Don't know (SKIP TO Q. 26) [___]
99. No response (SKIP TO Q. 26) [___]

22. How old were you when you first tried a cigarette? [____]

1.7 years old or younger [___]
2. 8 or 9 years old [___]
3.10 or 11 years old [___]
4.12 or 13 years old [___]
5.14 or 15 years old [___]
6. 16 years old or older [___]
88.Don't know [___]
99.No response [___]

23. During the past 30 days have you smoked any cigarettes? [____]

0. No (SKIP TO Q. 26) [___]
1. Yes [___]
88. Don't know (SKIP TO Q. 26) [___]
99. No response (SKIP TO Q. 26) [___]

24. During the past 30 days, on how many days did you smoke cigarettes? [____]

1. 0 days [___]
2. 1 or 2 days [___]
3. 3 to 5 days [___]
4. 6 to 9 days [___]
5. 10 to 19 days [___]
6. 20 to 29 days [___]
7. All 30 days [___]
88. Don't know [___]
99. No response [___]

25. During the past 12 months, have you ever tried to stop smoking cigarettes? [____]

1.No [___]
2. Yes [___]
3.I did not smoke cigarettes during the past 12 months [___]
4.I have never smoked cigarettes regularly [___]
88. Don't know [___]
99. No response [___]

26. During the past 7 days, on how many days have people smoked in your presence? [____]

1. 0 days ___]
2. 1 or 2 days [___]
3.3 or 4 days [___]
4. 5 or 6 days [___]
5. All 7 days [___]
88. Don't know [___]
99. No response ___]

27. Do any of your parents/guardians use any form of tobacco? [____]

0. No (SKIP TO Q. 29) [___]
1. Yes [___]
88. Don't know (SKIP TO Q. 29) [___]
99. No response (SKIP TO Q. 29) [___]

28. Which of your parents/guardians use any form of tobacco? [____]

1. Neither [___]	2. My father or male guardian only [___]
3.My mother or female guardian only[___]	4.Both smoke [___]
88.Don't know [___]	99.No response [___]

The next questions ask about ganja or ganja, crack, cocaine and other hard drugs

29. Have you ever had ganja in any form? [____]

0. No (SKIP TO Q. 38) [___]
1. Yes [___]
88. Don't know(SKIP TO Q. 38)[___]
99. No response (SKIP TO Q. 38)[___]

30. Have you ever taken ganja tea? [____]

0.No (SKIP TO Q. 32) [___]
1. Yes [___]
88.Don't know (SKIP TO Q. 32) [___]
99. No response (SKIP TO Q. 32) [___]

31. How many times have you taken ganja tea in the last 30 days? [____]

1.None at all [___] 2. Less than once per week [___]
3.Once or twice per week [___] 4. Three or four times per week [___]
5.Five times or more per week [___]
88. Don't know [___] 99. No response [___]

32. Have you ever tried **smoking** ganja? [____]

0.No (SKIP TO Q. 38) [___] 1. Yes [___]
88.Don't know (SKIP TO Q. 38) [___] 99.No response (SKIP TO Q. 38) [___]

33. How old were you when you first started smoking ganja? [____]

1.7 years old or younger [___] 2. 8 or 9 years old [___]
3.10 or 11 years old [___] 4.12 or 13 years old [___]
5.14 or 15 years old [___] 6. 16 years old or older [___]
88.Don't know [___] 99.No response [___]

34. What was the reason you started smoking ganja? (*Tick all that apply)*

1.	My friends were smoking ganja	
2.	I wanted to try	
3.	I heard that you feel good when you smoke ganja	
4.	Other (Specify)_____	
88.	Don't know	
99.	No response	

35. Have you smoked any ganja in the past 12 months? [____]

0.No [___] 1. Yes [___]
2.Not sure [___]
88. Don't know [___] 99. No response [___]

36. Have you smoked any ganja in the past 30 days? [____]

0. No (SKIP TO Q. 38) [___] 1. Yes [___]
2.Not sure [___]
88.Don't know (SKIP TO Q. 38) [___] 99.No response (SKIP TO Q. 38) [___]

37. How many times in the last 30 days have you smoked ganja? [____]

1. None at all [___] 2. Less than once per week [___]
3. Once or twice per week [___] 4. Three or four times per week [___]
5. Five times or more per week [___]
88. Don't know [___] 99. No response [___]

38. Have you used cocaine/crack in the past 12 months? [____]

0. No (SKIP TO Q. 45) [___] 1. Yes [___]
2. Not sure [___]
88. Don't know(SKIP TO Q. 45)[___] 99.No response (SKIP TO Q. 45) [___]

39. How old were you when you first started using crack/cocaine? [____]

1.7 years old or younger [___] 2. 8 or 9 years old [___]
3.10 or 11 years old [___] 4.12 or 13 years old [___]
5.14 or 15 years old [___] 6. 16 years old or older [___]
88. Don't know [___] 99. No response [___]

40. How often have you used cocaine in the past 12 months? [____]

1.Never [___] 2. Once or a few times [___]
3.Monthly [___] 4. Weekly [___]
5.Daily [___]
88. Don't know [___] 99. No response [___]

41. How often have you used crack in the past 12 months? [____]

1.Never [___] 2. Once or a few times [___]
3.Monthly [___] 4.Weekly [___]
5.Daily [___]
88. Don't know [___] 99. No response [___]

42. Have you used cocaine/crack in the past 30 days? [____]

0.No (SKIP TO Q. 45) [___] 1. Yes [___]
2.Not sure [___]
88.Don't know (SKIP TO Q. 45) [___] 99.No response (SKIP TO Q. 45)[___]

43. How many times in the last 30 days have you used cocaine? [____]

1.None at all [___] 2. Less than once per week [___]
3.Once or twice per week [___] 4. Three or four times per week [___]
5.Five times or more per week[___]
88. Don't know [___] 99. No response[___]

44. How many times in the last 30 days have you used crack? [____]

1.None at all [___] 2. Less than once per week [___]
3.Once or twice per week [___] 4. Three or four times per week [___]
5.Five times or more per week [___]
88.Don't know [___] 99. No response [___]

45. Have you used other drugs in the past 12 months? [____]

0.No (SKIP TO Q. 47) [___] 1. Yes [___]
2.Not sure [___]
88.Don't know (SKIP TO Q. 47) [___] 99. No response (SKIP TO Q. 47)[___]

46. During the past 12 months how often have you used...

(Note to interviewer: Circle the number representing the response)

	Never	**Once or a few times**	**Monthly**	**Weekly**	**Daily**	**Don't know**	**No resp.**
46a. Ecstasy	0	1	2	3	4	88	99
46b. Inhalants *(glue, gas, paint)*	0	1	2	3	4	88	99
46c. Sedatives *(downers, sleep aids)*	0	1	2	3	4	88	99
46d. Heroin *(morphine)*	0	1	2	3	4	88	99
46e. Hallucinogens *(acid, dust*	0	1	2	3	4	88	99
46f. Steroids *(juice)*	0	1	2	3	4	88	99
46g. Amphetamines *(speed, ice)*	0	1	2	3	4	88	99

47. How difficult do you think it would be for you to get each of the following types of drugs, if you wanted it?*(Note to interviewer: Circle the number representing the response)*

	Very easy	**Fairly easy**	**Fairly diff.**	**Very diff.**	**Probably Impossible**	**Don't know**	**No resp.**
47a. Ganja	1	2	3	4	5	88	99
47b. Cocaine	1	2	3	4	5	88	99
47c. Crack	1	2	3	4	5	88	99
47d. Alcohol	1	2	3	4	5	88	99
47e. Cigarettes	1	2	3	4	5	88	99
47f. Steroids *(juice)*	1	2	3	4	5	88	99
47g. Amphetamines *(speed, ice)*	1	2	3	4	5	88	99

48. How many of your friends do the following?
Note to interviewer: Circle the number representing the response

	None	A Few	Some of them	Most of them	All of them	Don't know	No resp.
48a. Smoke Cigarettes	1	2	3	4	5	88	99
48b. Drink alcohol	1	2	3	4	5	88	99
48c. Use Ganja	1	2	3	4	5	88	99
48d. Use cocaine or crack	1	2	3	4	5	88	99
48e. Use other drugs	1	2	3	4	5	88	99

K. SEXUAL BEHAVIOUR MODULE

Sex is often an important part of people's lives. Though it is very private, we hope that you will share some information with us so we can better understand the concerns and questions of people your age. Remember that you answers will be kept private.
Sex used here refers to vaginal intercourse (when a man puts his penis into a woman's vagina) and anal intercourse (when a man puts his penis into his partner's anus)

1. Where do you get information or learn about sex? *(Tick all that apply)*

1. Mother	
2. Father	
3. Other relative_____ *(specify)*	
4. Boyfriend/Girlfriend	
5. Friends	
6. Class at School	
7. Books	
8. Television or video	
9. Other way, please specify _____	
10. No information	
88. Don't know	
99. Non-response	

2. Which of these did you learn the most from (see table, above)? [____]
_____ (*specify)*

3. Have you ever been involved in kissing or petting/touching with a boy/man? [____]
0.No [___] 1. Yes [___]
88.Don't know [___] 99. No response [___]

4. Have you ever been involved in kissing or petting/touching with a girl/woman? [____]
0.No [___] 1. Yes [___]
88.Don't know [___] 99. No response [___]

5. Have you ever had sexual intercourse? [____]
0.No (SKIP TO NEXT SECTION)[___] 1. Yes [___]
88. Don't know (SKIP TO NEXT SECTION)[___] 99.No response (SKIP TO NEXT SECTION) [___]

6. How old were you when you had sexual intercourse for the first time? [____]
|__|__| age (years)

88. Don't know [___] 99. No response [___]

7. When you had sexual intercourse for the first time, how did it happen? [____]

1.	I agreed to it [___]	2.	I didn't agree but I didn't do or say anything to the perpetrator [___]
3.	I was forced [___]	4.	Other (specify)_____ [___]
88.	Don't know [___]	99.	No response [___]

8. In your whole life, how many people have you had sexual intercourse with? [____]

1.	1 person [___]	2.	2 people [___]	3.	3 people [___]
4.	4 people [___]	5.	5 people [___]	6.	6 people [___]
7.	7 people [___]	8.	8 people [___]	9.	9 people [___]
10.	10 or more persons [___]	88.	Don't know [___]	99.	Non-response [___]

9. In the last three months how many people have you had sexual intercourse with[____]

0.	No one (SKIP TO Q.11) [___]	1.	1 person [___]
2.	2 people [___]	3.	3 people [___]
4.	4 people [___]	5.	5 people [___]
6.	6 or more people [___]		
88.	Don't know (SKIP TO Q.11) [___]	99.	No response (SKIP TO Q.11) [___]

10. Over the last three months how often did you usually have sexual intercourse? [____]
(TICK ONLY ONE)

1.	More than 3 times per week [___]	1.	1-3 times per week [___]
2.	1-3 times per month [___]	3.	Less than once per month [___]
88.	Don't know [___]	99.	No response [___]

11. The last time you had sexual intercourse did you or your partner use a condom? [____]

0.	No [___]	1.	Yes [___]
88.	Don't know [___]	99.	No response [___]

12. The last time you had sexual intercourse, which of the following birth control /family planning methods did use? *(Tick all that apply)*

1.	None	
2.	Withdrawal	
3.	Condom	
4.	Injection (Depo Provera)	
5.	Regular birth control pill	
6.	Morning after pill	
7.	Sponge, cream or diaphragm	
8.	Douche	
9.	Some other method_____ *(specify)*	
88.	Don't know	
99.	Non-response	

13. When you have sexual intercourse and don't use birth control, what are the reasons?
(INTERVIEWER – DO NOT READ THE RESPONSES, JUST TICK ALL RESPONSES GIVEN)

1.	I didn't think of it	
2.	I didn't want to use it	
3.	My partner didn't want to use it	
4.	It is wrong to use birth control	
5.	I didn't have time to prepare	
6.	Sex isn't as nice when you use it	
7.	It's too much hassle to use any	
8.	I didn't know where to get any	
9.	It is too expensive	
10.	I was high on drugs or alcohol	
11.	I didn't want my partner to think I have sex often	
12.	Always use birth control	
13.	Other reason _____*(specify)*	
88.	Don't know	
99.	Non-response	

14. Where do you usually get your contraception (birth control)?
(TICK ALL THAT ARE MENTIONED)

1.	Local clinic	
2.	Buy it at a shop	
3.	From my private doctor	
4.	From my partner	
5.	From a friend	
6.	Other_____	
7.	Not applicable, I don't use birth control	
88.	Don't know	
99.	Non-response	

15. Have you ever received money or gifts in exchange for sex? [____]
0. No [___] 1. Yes [___]
88. Don't know [___] 99. No response [___]

16. Have you ever given money or gifts in exchange for sex? [____]
0. No [___] 1. Yes [___]
88. Don't know [___] 99. No response [___]

17. Have you ever had a sexually transmitted infection (STI or STD) or venereal disease[____] (VD)? (e.g. discharge, sore)
0. No [___] 1. Yes [___]
88. Don't know [___] 99. No response [___]

18. Have you had a genital discharge in the past 12 months? [____]
0. No [___] 1. Yes [___]
88. Don't know [___] 99. No response [___]

19. Have you had a genital ulcer/sore during the past 12 months? [____]
0. No [___] 1. Yes [___]
88. Don't know [___] 99. No response [___]

20. Did you do any of the following the last time you had a Sexually Transmitted Infection (STI)?
(Circle all relevant options)

1.	Seek advice/medicine from a health worker in clinic or hospital?	
2.	Seek advice/medicine from a pharmacy?	
3.	Seek advice/medicine from a traditional healer?	
4.	Took medicine you had at home	
5.	Tell your partner about the discharge/STD	
6.	Stop having sex when you had the symptoms	
7.	Use a condom when having sex during the time you had the symptoms	
77.	Not Applicable – Did not have a sexually transmitted infection	
88.	Don't know	
99.	No response	

21. Have you ever been pregnant/gotten a girl pregnant? [____]
0.No (SKIP TO THE NEXT SECTION)[___] 1. Yes [___]
88.Don't know (SKIP TO THE NEXT SECTION)[___] 99.Non- response (SKIP TO THE NEXT SECTION) [___]

22. How many times have you ever been pregnant/gotten a girl pregnant? [____]

|____|___| # of times
88. Don't know [___] 99. No response [___]

GIRLS ONLY (BOYS SKIP TO SECTION L)

23. Did you have high blood pressure during any pregnancy? [____]
0. No [___] 1. Yes [___]
88. Don't know [___] 99. No response [___]

24. What happened with the pregnancy? *(If more than one pregnancy, refer to the most recent pregnancy)*

1.	One of us kept the baby	
2.	We are raising the baby together	
3.	One of our families is raising the baby	
4.	The baby was placed for adoption (SKIP TO NEXT SECTION)	
5.	The baby was placed for foster care (SKIP TO NEXT SECTION)	
6.	The pregnancy was terminated (abortion) (SKIP TO NEXT SECTION)	
7.	Miscarriage (The baby died) (SKIP TO NEXT SECTION)	
8.	Pregnant and not sure what to do (SKIP TO NEXT SECTION)	
88.	I don't know what happened (SKIP TO NEXT SECTION)	
99.	No response (SKIP TO NEXT SECTION)	

25. Are you breastfeeding now? [____]
    0.No (SKIP TO Q. 27) [___] 1. Yes [___]
    88.Don't know (SKIP TO Q. 27) [___] 99.No response (SKIP TO Q. 27)[___]
26. How old is this child? [____]
    |____|____| age of child (months)
    88. Don't know [___] 99. No response [___]
27. For how long was your last child breastfed? [____]

    |___|___| Length of breastfeeding (months)
    00. Never [___] 88. Don't know [___] 99. Non-response [___]
28. Who looks after the child when you are in school, busy, or just can't do it
(TICK ALL THAT APPLY)

1.	I don't have a child	
2.	I'm not raising the child	
3.	Changes from day to day	
4.	One of our families	
5.	Friends or neighbours	
6.	Day care centre	
7.	I take the child with me	
8.	I leave the child alone for awhile	
88.	Don't know	
99.	No response	

29. How often do you spend time with your child? [____]
    1.I don't have a child [___] 2. Everyday [___]
    3.A few times a week [___] 4. Once a week [___]
    5.A few times a month [___] 6. Once a month [___]
    7.Less than once a month [___] 8. Never [___]
    88.Don't know [___] 99. No response [___]

L. SOURCES OF INFORMATION

This next section asks you about where you typically get information on health. This information is important for developing programs that meet youth needs. We appreciate your input up to now and we are almost finished!

1. What are the main sources from which/whom you obtain information on health and health issues? [____]
   (*TICK ALL THAT APPLY)*
   1.No sources of information (no information) [___] 2. Health Worker [___]
   3. School talks/classes [___] 4.TV [___]
   5. Radio [___] 6 Posters/Magazines/Newspapers [___]
   7. Parent/Family member [___] 8.Friend [___]
   9. Other [___]
   (specify)_____
   88. Don't know [___] 99. No response [___]
2. What are the main sources from which/whom you **would like to** obtain information on health and health issues? (*Tick all that apply)* [____]

1.Health Worker	[___]	2. School talks/classes	[___]
3.TV	[___]	4. Radio	[___]
5.Posters/Magazines/Newspapers	[___]	6.Parent/Family member	[___]
7.Friend	[___]	8.Other (specify)_____	
88. Don't know	[___]	99. No response	[___]

3. How often do you listen to the radio for information or entertainment? [____]

1.Never	[___]	2. Less than once per month	[___]
3.At least once per month	[___]	4.At least once per week	[___]
5.2-3 times a week	[___]	6.Everyday or almost everyday	[___]
88. Don't know	[___]	99. No response	[___]

Thank you for taking the time to participate in this survey that will help us to better understand young people in Jamaica and find ways to keep them safe. I appreciate your being open and honest with me during this survey which I know was long and personal.

YOUTH RISK AND RESILIENCY BEHAVIOUR SURVEY (15-19 YRS) 2006

FORM 1
PULSE AND BLOOD PRESSURE MEASUREMENT

QUESTIONNAIRE ID NO. . |___|___|___|___|___|___|___|___| **REG PAR ED RE**	I.D. OF INTERVIEWER |___|___|
DATE OF EXAM |___|___| |___|___| |___|___|___|___| DY MO YR	

NAME OF PARTICIPANT: _____

Now I will explain the procedure for measuring your pulse and blood pressure. It is important that you remain relaxed and seated for the measurement which will take about 15 minutes. Please do not cross your feet or legs during the measurements. I will wrap the blood pressure cuff around your arm, take your pulse and then inflate the cuff. You will feel a sensation of pressure on your arm when the cuff is inflated. I will be inflating the cuff a maximum of 5 times. While I am measuring your blood pressure, it is best if we do not talk. If you have any questions, I will be happy to answer them for you before or after the measurement is taken. I will tell you the results of the measurements afterward.

1. Have you had any food, alcohol, coffee or cigarettes within the last 30 minutes?	Food: 0 [ ] N 1 [ ] Y Alcohol: 0 [ ] N 1 [ ] Y Coffee: 0 [ ] N 1 [ ] Y Cigarettes: 0 [ ] N 1 [ ] Y
2. Arm circumference:	|____|____| . |____|
3. Cuff size selected:	0 [ ] Small adult 9 (17 – 25 cm) 1 [ ] Adult (25 – 35 cm) 2 [ ] Large (31 – 40 cm) 3 [ ] Thigh (38 – 50 cm)
4. Arm selected:	0 [ ] Right 1 [ ] Left _____ Reason
5. Pulse rate for 30 seconds:	|____|____|
6. Pulse regular?	1 [ ] Yes 1 [ ] No
7. Pulse Obliteration Pressure (POP):	|____|____|____|
8. Maximum inflation level: POP + 30 mmHg=	|____|____|____|
9. First blood pressure measurement: 0 [ ] BP refused – Reason : _____ 1 [ ] BP not done	|____|____|____| / |____|____|____| SBP DBP

Reason: _____	
10. Pulse rate for 30 seconds:	|____|____|____|
11. Second blood pressure measurement:	|____|____|____| / |____|____|____| SBP DBP
12. Pulse rate for 30 seconds:	|____|____|____|
13. Third blood pressure measurement:	|____|____|____| / |____|____|____| SBP DBP

YOUTH RISK AND RESILIENCY BEHAVIOUR SURVEY (15-19 YRS) 2006

FORM 2
BODY MEASUREMENTS

QUESTIONNAIRE ID NO. . |___|___|___|___|___|___|___|___| **REG PAR ED RE**	I.D. OF INTERVIEWER |___|___|
DATE OF EXAM |___|___| |___|___| |___|___|___|___| D M YR	

NAME OF PARTICIPANT: _____

Now I am going to measure your height, weight, and waist and hip measurements. I will explain each one as we do it. WEIGHT RECORD SCALE IDENTIFICATION NUMBER	|____|____|____| . |____| kgs |____|____|
HEIGHT	|____|____|____| . |____| cm
WAIST CIRCUMFERENCE What clothing was the measurement taken over?	1. |____|____|____| . |____| cm 2. |____|____|____| . |____| cm 3. |____|____|____| . |____| cm 0 [ ] No clothing: skin 1 [ ] Shirt or dress 2 [ ] Trousers only 3 [ ] Shirt & trousers
BUTTOCKS (HIP) CIRCUMFERENCE What clothing was the measurement taken over?	1. |____|____|____| . |____| cm 2. |____|____|____| . |____| cm 3. |____|____|____| . |____| cm 0 [ ] No clothing: skin 1 [ ] Shirt or dress 2 [ ] Trousers only 3 [ ] Shirt & trousers

YOUTH RISK AND RESILIENCY BEHAVIOUR SURVEY (15-19 YRS) 2006

FORM 3
FASTING GLUCOSE TEST

QUESTIONNAIRE ID NO. |___|___|___|___|___|___|___|___| **REG PAR ED RE**	I.D. OF INTERVIEWER |___|___|
DATE OF EXAM |___|___| |___|___| |___|___|___|___| D M YR	

NAME OF PARTICIPANT: _____

1. What time and date did you last eat? TIME: |____|____| : |____|____| 0 [ ] AM

1 [ ] PM

DATE: |___|___| |____|___| |___|___|___|___|

D M YR

2. What time and date did you last have something other than water to drink?

TIME: |____|____| : |____|____| 0 [ ] AM

1 [ ] PM

DATE: |___|___| |___|___| |___|___|___|___|

D M YR

3. What time and date did you last smoke? TIME: |____|____| : |____|____|
0 [ ] AM1 [ ] PM

DATE: |___|___| |___|___| |___|___|___|___|

D M YR

Date the blood was drawn:
DATE: |___|___| |___|___| |___|___|___|___|

D M Y

Time of fasting sample:
|____|____| : |____|____| 0 [ ] AM1 [ ] PM

Fasting glucose level:
|____|____| . |____| mmol/L

Cholesterol level:
|____|____| . |____| mmol/L

COMMENTS: