Adolescent Health Risk Behaviors in Uganda: A National Cross Sectional Study

Final Study Report
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THE REPUBLIC OF UGANDA
MINISTRY OF HEALTH

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JOINT UNITED NATIONS PROGRAMME ON HIV/AIDS

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ABBREVIATIONS AND ACRONYMS

AIDS	Acquired immune deficiency syndrome
CVD	Cardiovascular Diseases
EA	Enumeration area
ESPAD	European School Survey Project on Alcohol and Other Drugs
GBV	Gender-based violence
GER	Gross Enrolment Ratio
GYTS	Global youth tobacco survey
HIV	Human immunodeficiency virus
MakSPH	Makerere University School of Public Health
MICS	Multiple Indicator Cluster Survey
NER	Net Enrolment Ratio
NHPC	National Housing and Population Census
PSU	Primary Sampling Unit
STI	Sexually Transmitted Infection
UBOS	Uganda Bureau of Statistics
UDHS	Uganda Demographic Health Survey
UNAIDS	The Joint United Nations Program on HIV and AIDS
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UN Women	United Nations Entity for Gender Equality and the Empowerment of Women
WHO	World Health Organization

OPERATIONAL DEFINITIONS

Adolescent: A person aged 10-19 years

Adolescent Health Risk Behavior: Health-compromising behaviors that adolescents engage in resulting in adverse health and social outcomes[1].

Gender based violence: This referred to any coercive/uninvited act in form of physical assault, sexual, emotional, or psychological harm experienced by women. This included threats of such acts as coercion or arbitrary deprivation of freedom whether occurring in private or in public[2].

Sexual abuse: Any type of unwanted sexual contact/the actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions[3].

Sexual debut: Referred to initiation or first sexual intercourse/experience

Sexual Violence: This meant any sexual act, attempt to obtain a sexual act, or other act directed against an adolescent's sexuality using coercion, by any person regardless of their relationship to the adolescent in any setting[4].

Substance: Substance in this study meant a product taken in the body and affects the way one feels, thinks, sees, tastes, smells, hears, walks or behaves. It can be a medicine such as morphine or it can be an industrial product such as glue and petroleum. Some substances are legal like approved medicines and cigarettes and others re illegal like heroine, cannabis

[1]HTTP://WWW.WHO.INT/MATERNAL_CHILD_ADOLESCENT/TOPICS/ADOLESCENCE/DEV/EN/

[2]UN Declaration on the Elimination of Violence against Women, 20 December 1993, A/RES/48/104, 85th plenary meeting

[3]UN Secretary- General's bulletin, st/sgb/2003/13

[4]WHO, World report on violence and health, 2002

EXECUTIVE SUMMARY

Background: Adolescents, as defined by the World Health Organization, are individuals aged 10-19 years. Adolescence is a period characterized by rapid biological, emotional and social changes and development. Twenty five percent (25%) of Uganda's 34.6 million population are adolescents, who are faced with social and health challenges including injuries and/or exposure to violence; sexual and reproductive health issues; drug and substance use and abuse, physical inactivity, poor nutrition and mental disorders that hinder their ability to grow and develop to their full potential. However, data are limited on health and social risk behaviors of adolescents especially the 10-14 year-old. Ministry of Health working collaboratively with UNICEF, WHO, UN-Women, UNFPA, UNAIDS and Makerere University School of Public Health conducted a survey to generate key social issues and health concerns of adolescents in Uganda.

It is hoped that this information will be used to design and implement innovative and appropriate adolescent targeted and responsive interventions and will act as benchmark for future adolescent research.

Methods: During September 2016, a cross-sectional community based quantitative study was conducted among 4715 adolescents randomly selected from 162 sampled enumeration areas in 95 districts from the five geographical regions of Uganda (Central, Eastern, Northern, Western and Kampala).

Key Findings:

SOCIO-DEMOGRAPHIC CHARACTERISTICS

Overall, 4715 adolescents were interviewed out of the calculated sample size of 4855 giving a response rate of 97.1%. A higher percentage, 54.1% (n=2545) being female and over half (53.4%) of the adolescents were aged between 10- 14 years. Majority of the respondents were Catholic (39.2%) followed by Anglican (31.8%), Pentecostal (12.8%) and Muslim (13.1%). Religion varied significantly across regions with North having two-thirds (67.5%) as Catholics,

Kampala with 20% as Pentecostal and 26.7% Muslim, while the western region had 43.4% as Anglicans.

COMMON HEALTH RISK BEHAVIORS

Alcohol use: Ever use of alcohol was reported by 17% while recent alcohol-use (past 30 days) was by 2.2%.

Sexual risk behaviors: Overall one in five (21.5%) adolescents reported ever had sexual intercourse, and 10% of the sexually active adolescents aged 15-19 years had first sex encounter before age 15. Multiple lifetime partnership was common (43.6%), as was transactional sex (26.9%). None use of condoms with last sexual partner was 57.3% while trans-generational sex was7.1%.

Physical & emotional abuse and empowerment: Bullying was common (39.1%) mainly through teasing, spreading rumors, abusing and beating. Nearly three-quarters (73%) had ever experienced violence through physical (60%), emotional (41.5%) and sexual (9.6%) forms. Lack of knowledge about their health rights was mention by more than a third (37.7%) and just over a half (51.6%) mentioned not being involved in making decisions about their lives.

Sedentary lifestyle was common (76.1%) where physical exercises were irregular (less than 7 days a week), and 21% watched TV for ≥2 hours in a day.

HEALTH AND SOCIAL OUTCOMES

Nutrition*:* Overweight (6.8%) and underweight (6.5%) were similar and stunting was common (15.5%) especially among adolescents with low socio-economic status and those aged 10-14 years.

Reproductive Health:

a) *Adolescent marriages, pregnancies and unintended pregnancies, and contraceptive use:*

Ever married (3.8%), currently married (3.2%), and currently pregnant (2.2%) were mentioned by adolescents. Unintended pregnancy was high (41.5%), especially among girls enrolled in school at time of the survey (100%, n=7).

b) HIV, STIs and other chronic diseases:

Awareness of HIV was very high (93.6%) but ever-testing low (42.5%) with a 1.9% self-reported HIV infection. Self-reported ever infection with STIs was twice as high in females (13%) compared to males (6%), while the commonest self-reported chronic diseases were asthma (20.7%) and hypertension (5.3%).

Schooling and individual menstrual practices

Schooling: Enrolment into school was high (81%) and appeared to be higher among males (84%) relative to females (78%). The overall Net Enrolment Ratio (NER) for primary school was 96.7%, and only 58.7% for the secondary school. In this survey awareness of menstruation among girls was high (80%) with just over a half (56.4%) already reporting experience with the first menstrual periods. The commonest materials used during menstruation were disposable sanitary pads (52.1%) and reusable materials (46%) but a few girls did not use any material (1.6%). A quarter (26%) of the girls reported absenteeism from school due to menstruation. Two-thirds (64%) of adolescents who had started their menses missed school because they felt sick or uncomfortable and 29% lacked sanitary pads during menstrual periods.

Summary: The prevalence of common health risk behaviors such as transactional sex, lifetime multiple sexual partnerships and trans-generational sex among adolescents are common. Innovative and responsive adolescent targeted strategies should be designed at all levels including community, school and family so as to address health risk behaviors.

REPORT STRUCTURE

Following the executive summary, Chapter one presents the introduction of the study, Chapter two focuses on justification of the study and objectives are presented in chapter three. In Chapter four the methods that were used in conducting the study are presented. Chapter five has the study findings which are arranged under different themes. Under each theme are results, interpretations and a summary respectively. Strengths, challenges and limitations of the study are presented in Chapter six. Chapter seven has the summary of key findings. Chapters eight and nine show lessons learned and recommendations from the study.

1. INTRODUCTION

The World Health Organization (WHO) defines adolescence as the age 10-19 years. This phase of development represents a transition period in human growth and development characterized by a rapid biological, emotional and social development [1]. Adolescents face influences which can lead to health risk behaviors and related outcomes including alcohol or tobacco use, physical inactivity, intimate relationships coupled with unprotected sex leading to unintended pregnancies, and injuries and/or exposure to violence which can jeopardize their health and ability to grow and develop to their full potential. There are also risks of mental health disorders due to various adjustments that young people deal with during adolescence. This period is therefore marked with several risk behaviors which if not well attended to can lead to long lasting negative outcomes on the health and well-being of adolescents. Studies show that more than 33% of the disease burden and almost 60% of premature deaths among adults can be associated with behaviors or conditions that began or occurred during adolescence [2-4]. There is equal evidence demonstrating that socioeconomic and cultural factors play critical role in determining adolescent's adoption and persistence with healthy behaviors and access and utilization of services [5].

> More than a third of the global burden of disease and nearly 6 in 10 of the premature deaths among adults can be associated with behaviors or conditions that began or occurred during adolescence.

According to the WHO, services for adolescents are often fragmented, poorly coordinated and uneven in coverage and quality [6]. Even the relatively well developed adolescent friendly HIV/AIDS and Sexual and Reproductive Health (SRH) services are challenged by inequities in access and use of services at various levels. Accessibility to reproductive health services were low with high levels of unmet needs for SRH information, family planning, and HIV testing [7]. On the other hand, there is limited data and evidence on health risk behaviors and health indicators among the adolescents in Uganda. For example; the UDHS 2016 revealed that 25% of adolescents age 15-19 in Uganda had begun childbearing: 19% of women age 15-19 have given

birth, and another 5% were pregnant with their first child at the time of interview[8]. This survey did not study adolescents aged 10-14 years.

This evidence gap limits the ability to design or develop innovative and effective adolescent focused programs/interventions that can address the health, social, environmental and economic challenges that have hindered adolescent health and wellbeing.

In Uganda, nearly a quarter (24.5%) of the population is composed of adolescents (10-19) years [9]. Adolescent services in Uganda have been guided by the adolescent health policy and strategy that was developed several years ago that is being updated to improve coordination of planning and implementation of adolescent responsive services to meet the national need [10, 11].

Teenage pregnancy (24%) and HIV-infection (3.7%) are some of the main adolescent health risks (?? in Uganda) [12]. . There is limited access to innovative and effective adolescent specific information, preventive, counseling, diagnostic, treatment and care services. There is also lack effective coordination between the various stakeholders and entry points for adolescent services. Though many studies have shade light on isolated adolescent related issues, a systematic data on national prevalence of risk factors, determinants and association of health and social outcomes are limited and this knowledge gap is greater for young adolescents (age 10-14 years).

2. RATIONALE/JUSTIFICATION

Globally, there is a consensus on investing intensively in adolescents' health and development in order to achieve the Sustainable Development Goals (SDGs), specifically SGD 3, and to improve their survival and subsequent development into adulthood (references). The attainment of sustainable progress towards universal health coverage requires a transition from adolescent-friendly projects to responsive health systems that address the gender-specific needs and challenges of adolescents.

In order to achieve effective action plans and programs geared towards inclusive and equitable improvement of adolescent health, there is a need for systematically collected data on adolescent health and social well-being. Such data will provide empirical evidence on health risk behaviors and outcomes. Most of the currently available data are scanty with regard to 10-14 years age category thus limiting the understanding of the complete spectrum of the adolescence health. For example, the Uganda AIDS Indicator Survey, Uganda Demographic and Health Surveys (DHS), and nutritional survey, which are all national, only consider the 15-19 year olds in the adolescent category. The other challenge with the available data is differences in the level of coverage of the key adolescent health issues. Data on health risk behaviors such as gender based violence, physical inactivity, nutritional behaviors such as skipping meals; eating fast foods and having unbalanced diet, alcohol and substance abuse, risky sexual behaviors, and engagement in risky activities such as prostitution are limited [13, 14]. Studies show poor dietary intake behaviors during adolescence contribute to non-communicable diseases [15-17].

This study aimed at generating data on adolescent focused health risk behaviors and associated outcomes in order to inform the development and strengthening of adolescent focused programs, strategies and policies. Furthermore, this study's findings will be a benchmark for future adolescent research and interventions and Uganda's national response and progress towards the achievement of SDGs.

3. OBJECTIVES

The overall objective of this survey was to generate nationally representative data on the prevalence of adolescents' health risk behaviors including schooling, teenage pregnancy, HIV/STI, injuries, mental health and gender-based violence in Uganda.

Specifically, the study focused on the following objectives;

Primary:

To determine the prevalence of common health risk behaviors among adolescents aged 10-19 years in Uganda.

Secondary:

To describe common social and health outcomes of common risk behaviors among adolescents.

4. METHODS

4.1. STUDY DESIGN

This was a cross sectional study that employed quantitative methods of data collection among adolescents from randomly sampled enumeration areas in the five geographical regions of Uganda (Central, Eastern, Northern, Western and Kampala).

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4.2. SAMPLE SIZE & SAMPLING

4.2.1. Sample Size Determination

The sample size was estimated using the following formula:

$$n = \frac{Z^2_{\alpha/2} * p(1-p)}{se^2} \; X \; \frac{DEFF}{R}$$

Estimates for female and male adolescents were conducted differently. To estimate the female's sample, the following assumptions were made; p=0.15 or 15% (the percent of adolescent girls who have already initiated sex). The current DHS2011 shows 36.5% aged 15-19 years have initiated sex prior to their current age. This estimate was assumed to be lower among the 10-14 year olds. Therefore, the average for the spectrum for 10-19 year old was estimated and assumed to be 15%. Substituting the formula and considering a *margin of error/precision of* =0.05, *DEFF* (design effect) =2.0, a type-I error rate of 5%, and a non-response rate, R = estimated at 0.10 or 10% returned the overall sample size of 431 female adolescent girls per geographical region.

The sample size for boys was estimated based on rates of alcohol consumption, smoking and drug abuse among male adolescents. We assumed; p=20% of adolescents (more commonly boys) aged 10-19 years are involved in alcohol, smoking and drug abuse, a margin of error of 0.05, design effect of 2.0, a type-I error rate of 5%, and non-response of 10%. This resulted into a sample size of 540 male adolescents per region. In order to enable regional and national estimate, a total of 2700 male adolescents was taken as the minimum required sample size from all the 5 regions.

Therefore overall sample size was 4855 (from 431*5 + 540*5) adolescent boys and girls, randomly selected from 162 enumeration areas with 30 households per enumeration area.

4.2.2. Training of Research Assistants/Data collectors

Training of the interviewers was conducted by skilled study staff (investigators, map reading specialist and an adolescent expert from Makerere University School of Medicine, UNICEF and WHO), over a six day period. It covered areas in research ethics and human subject protection with special focus on adolescents, study protocol and standard operating procedures, interview skills, data quality assurance and control.

Study PIs (Drs. Aggrey Mukose and Senait Kebede) during the training of data collectors at MakSPH- Mulago on 15th August 2016

Figure 1: Study principal investigators during the training of data collectors

4.2.3. Sampling strategy and data collection

The survey was conducted in 162 enumeration areas (EAs) located in 95 districts within the 5 geographical regions of Uganda using a two-stage sampling process (Appendix 1A). The sampled EAs, together with their selection probabilities were obtained from the Uganda Bureau of Statistics (UBOS) master sampling frame of EAs constructed in preparation for the 2014

National Housing and Population Census (NHPC). Maps for each of the 162 EAs were generated to guide the field teams in getting the actual EA boundaries. This enabled a correct estimate of all households within the selected EAs because no listing of households was conducted. The local community leadership and Village Health Teams (VHTs) provided a count of the total number of households within each EA.

Emphasis was made to clearly differentiate the EA from the village boundaries where these were different. A comparison of the provided count and the count as obtained from the 2014 NHPC frame was made to further guide a more appropriate total estimate of the number of households.

A total of 30 households per EA were estimated as the sample size that would generate minimum required number of adolescents for this study. Where the number of households per EAs was more than 30, systematic sampling technique was applied with sampling interval, "k". With a random start in the community, on sampling frame, we chose every k^{th} household until we obtained a final sample size. E.g. if an EA had a total of 90 households, then = 90/30. Thus, every 3^{rd} household with an adolescent was eligible. Extra 4 households were pre-selected as potential replacement households in case households selected in the first sample did not have any eligible study participants.

To select an eligible adolescent for inclusion into the study from a sampled household, a mini-household listing of all household members was conducted using the ***KISH Grid*** (Kish Leslie, 1965). All eligible household adolescent residents aged 10-19 years were flagged out in numerical descending order of age starting with males (first) and followed by females. An adolescent who had the eligible ordered number was selected and enrolled into the study (Appendix 1 B). Prior to initiating the adolescent interview, the interviewer requested to speak and conduct a mini interview with the head of the household to generate background socio-economic data and to request the household head consent on behalf of the minors.

Data collectors taking height and weight of adolescents in central Uganda

Figure 2: Data collectors taking height and weight of adolescents

4.3. QUALITY ASSURANCE AND CONTROL

Data were collected by a team of trained research assistants proficient in the local languages of the selected EAs. Pretesting of the tools and piloting of the protocol were conducted in Kasangati, which was not part of the final EAs. To ensure quality data collection, a supervisor was assigned per team to conduct field data editing (assessing completeness, correctness, consistency and accuracy) on a daily basis. Study investigators also provided extra checks on the field teams to ensure quality data.

Field supervision PI during data collection in Rakai district (Matale Kalagala "B" EA) on September 10th 2016

Figure 3: Field supervision with Principal Investigator during data collection in Rakai district

4.4. SURVEY MEASURES

Standardized tools (CDC and WHO risk behavior questionnaires for youth and adolescents) were adopted with modification to suit the local context. Data were collected on a number of health risks behaviors and outcomes including smoking, bullying, violence, injuries; sexual health-included teenage pregnancies, HIV status; mental health illness and nutritional status. Other key variables included –substance abuse (smoking and use of drugs such as alcohol), and, adolescent's individual characteristics which included age in years, sex, highest level of education attained, current enrolment in school and level of education at the time of the survey, marital status, peer influence, and family environment. Other variables included characteristics of household i.e., education level, age, size of HH, number of adolescents, history of mental illnesses among the adolescents and household wealth/income.

4.5. INCLUSION AND EXCLUSION CRITERIA

Although all adolescents aged 10-19 years in the selected households were eligible for participation, only one eligible adolescent from a household was included in the study. Those who were unable to assent due to either mental, physical disability or unwillingness to join the study were excluded.

4.6. ETHICS AND PROTECTION OF STUDY SUBJECTS

Ethical review and approval for this study were obtained from the Makerere University School of Public Health Higher Degrees Research and Ethics Committee and the Uganda National Council for Science and Technology.

In addition, ethical plans were adopted from the ***'Ethical Approaches to Gathering Information from Children and Adolescents in International Settings: Guidelines and Resources'****[18]***.** Protection and the well-being of study participants were prioritized. In order to further ensure the ethical conduct of research in children, research assistants were thoroughly trained in ethical conduct of research among human subjects and vulnerable populations. Participants were also

informed before the interview that if they were uncomfortable answering any question, they were free to skip such questions or to stop the interview at any time. The team sought informed consent from parents/guardians and assent from study participants. Both parents/guardians and participants were also informed that the study in no way had any bearing upon their status in their community and that their participation was voluntary and would not affect their or their family's access to health care or other support services. All persons working on the project were trained and orientated on how to maintain strict confidentiality.

4.7. DATA MANAGEMENT

Field data editors reviewed all the completed data collection forms for incompleteness and or inconsistency. The field supervisors then ensured that all the questionnaires were registered (logged-in) and assent/consent forms detached before sending them to the data management centre based at the Family Health Research and Development Center (FHRDC), MakSPH annex, Kasangati. Data entrants were oriented on the ethics of data management, and trained on data entry using previously developed data capture screens designed in the CSpro-software. Double data entry was conducted for all questionnaires with each entrant independently capturing data, and thereafter the first and second entries were compared to ensure consistency. Data were transformed from CSpro into Stata™ version 14 for the analysis.

4.7.1. Statistical analysis

Summary statistics were conducted to provide descriptive statistics of the study population using proportions for categorical variables and means (standard deviations) and median (inter-quartile range) for continuous variables. Proportions were estimated for primary health risk behaviors (drug and alcohol use, smoking and early marriages), teenage pregnancies, and marital status (ever married and currently married).

Analyses on schooling were conducted with focus on school enrolment using standard indicators, Gross Enrollment Ratio (GER) and Net Enrollment Ratio (NER) as defined below;

i) Gross Enrolment Ratio (GER-primary), defined as the proportion of pupils attending primary schools (P1-P7) irrespective of age, to the number of children aged 6-12 years in the entire population, and GER-secondary which refers to those attending secondary schools (S1-S6) to the number of children aged 13-18 years in the entire population).

ii) Net Enrolment Ratio (NER) defined as enrolment official age children divided by the total of all official age children.

The official ages for primary are "6-12 years", while for ordinary level are "13-16 years" and secondary including Advanced level "13-18 years"[19]. Statistical modeling was used to estimate the magnitude of associations between health risk behaviors and outcomes such as schooling, teenage pregnancy, self-reported STI (including HIV infection), nutrition status, and mental health. For binary outcomes, modified Poisson regression models were used to generate prevalence ratios (PRs) with their corresponding 95% confidence interval, while adjusting for potential confounders and testing for any interactions. The modified Poisson regression model estimates PRs, which are a better measure of association than odds ratios (ORs) when the proportion of the outcome is greater than 15%, in which case the ORs provide biased estimates. All analyses were weighted using the product of the inverse of EA probability sample and household selection per EA as analytical weights, and adjusted for clustering of observations/participants within EA so as to obtain appropriate standard errors around each measure of association.

5. FINDINGS

5.1. Socio-economic and demographic characteristics of respondents to the household questionnaire

A total of 4,715 respondents were interviewed using the household questionnaire. Socio-demographic results are presented in tables 1a and 1b and addition tables in appendix 1C (tables 1a1 and 1b1). These tables present un-weighted counts and weighted results; the latter accounts for the selection probabilities and represents the total target population. This study had a relatively balanced representation across regions with 1045 (25.9%) from Central and 1079 (24.6%) from Eastern region. Two thirds (n=3067, 65.6%) of respondents to the household questionnaire were females, 39.1% (n=1863) were Catholics and 57.1% (n=2492) had their highest level of education as primary. The mean age (SD) of the household respondent was 40.4 (13.1) years. The median household size was 6 people with an interquartile range (IQR, Q1, Q3) of 5 to 8 people. The median household monthly income (IQR) was Uganda shillings 100,000 (50,000-300,000) approximately $27.8 USD using an exchange rate at the time of the study of Uganda shillings 3596.46 per dollar.

Table 1a: Socio-demographic household characteristics

Characteristic	Region (%)						Total
	Central	East	Kampala	North	Western	%	Un-weighted count
Distribution of sample (row %)	25.9	24.6	5.9	16.1	16.1	100	4715
Sex							
Female	74.1	66.1	76.0	50.7	63.7	65.6	3067
Male	25.9	33.9	24.0	49.3	36.3	34.4	1554
Religion							
Catholic	39.2	28.2	30.4	67.0	34.5	39.1	1863
Anglican	26.6	38.9	24.4	18.7	45.0	33.4	1456
Pentecostal	14.1	12.5	21.2	6.3	11.7	12.2	587
Muslim	1.6	15.0	22.1	7.5	5.0	11.8	619
Other Christians: i.e. SDA, JW	*1.4	4.9	*1.0	*0.4	*1.1	2.0	83
Other (i.e. No religion, traditional)	2.1	*0.4	*0.9	*0	2.8	1.5	70
Education [c]							
Never attended school	11.3	12.5	5.3	22.5	22.4	16.1	753
Primary	53.0	59.6	31.0	56.9	64.4	57.1	2492
Secondary	28.2	23.9	51.5	15.0	10.9	21.6	1051
Tertiary	7.5	4.0	12.2	5.6	2.3	5.2	280

***Percentage based on un-weighted count below 25.**

Table 1b shows the health and living household characteristics (weighted percentages). The overall reported use of insecticide treated mosquito net the night before the interview was 64.5%; use was highest in the northern (75.9%) and lowest in the eastern regions of Uganda (53.1%). Nearly two thirds (n= 2886, 63%) of the household members had suffered from an illness or injury in the 30 days preceding the interview; 78.1% (n=3592) household structures had modern roofing materials (Iron sheets, Asbestos, tiles), and 72.1% reported access to a closed water source (tap, borehole, protected spring).

Table 1b: Health and living household characteristics

Characteristic	Region (%)					Total	
	Central	East	Kampala	North	Western	%	Unweighted count
Slept in a mosquito net [b]							
Yes (Treated bed-net)	62.7	53.1	58.1	75.9	71.2	64.5	2776
Yes (Untreated bed-net)	14.7	13.8	13.8	9.3	8.5	12.2	555
No net	22.6	31.7	28.1	14.8	20.3	23.3	995
Household member suffered from any illness or injury in past 30 days [c]							
Yes	63.4	70.4	52.1	54.1	63.3	63.0	2886
No	36.6	29.6	47.9	45.9	36.7	37.0	1792
Household's source of drinking water [d]							
Open (River, Stream, unprotected well)	26.7	10.4	22.7	17.2	48.0	27.9	1261
Closed (Tap, Bore hole, protected spring)	73.3	89.6	77.3	82.8	52.0	72.1	3402
Roofing materials [e]							
Modern (i.e. Iron sheets, Asbestos, tiles)	95.3	74.7	99.9	24.8	90.8	78.1	3592
Traditional (i.e. Thatch, Wood planks)	4.7	25.3	*0.1	75.2	9.2	21.9	1092

*Percentage based on un-weighted count below 25.

Summary

Majority of the respondents to the household questionnaire were females and this could be attributed to the fact that it is usually women who stay at home as men go to work.

This study reported 39.1%, 33.4% and 11.8% of the household respondents as being Catholics, Anglicans and Muslims respectively. These findings are similar to the 2016 Uganda Demographic Health Survey (UDHS) findings where 40%, 32% and 11.5% were Catholics, Anglicans and Muslims respectively[8]. Most participants reported that the household's source of drinking water was closed (Tap, bore hole, protected spring). Majority of the houses had modern roofing material (Iron sheets, Asbestos, tiles). The percentages for the sources of water and roofing materials used were similar to the findings of the 2014 National Population and Housing Census results [20] and might be due to the improvement of most household's economic status [21].

5.2 Socio-demographic characteristics of the adolescent study participants

In this study a total of 4,715 adolescents were interviewed and they constituted 97.1% of the estimated sample. This sample represents a weighted population of 8,715,763 adolescents aged 10-19 years in Uganda, which is consistent with 8,866,470 adolescents that were reported in the 2014 National Population and Housing Census. This suggests that this study provides nationally representative estimates.

Slightly over half, 54.1% (n=2545) were females, 53.4% were aged between 10- 14 years, and majority were Catholics (39.2%). Religion varied significantly across regions with North having two-thirds (67.5%) as Catholics, Kampala with 20% as Pentecostal and 26.7% Muslim, while the western region had 43.4% as Anglicans (Table 2a).

Table 2a: Distribution of adolescents by demographic characteristics

Characteristic	Region (%)					Total	
	Central	East	Kampala	North	Western	%	Unweighted count
Distribution of sample (row %)	25.9	24.6	5.9	16.1	27.5	100.0	4715
Sex							
Female	59.1	55.4	57.3	47.3	51.5	54.1	2545
Male	40.9	44.6	42.7	52.7	48.5	45.9	2156
Age category (Years)							
10-14	56.3	54.4	48.8	52.6	51.1	53.4	2478
15-17	26.8	28.1	30.0	31.0	28.4	28.4	1359
18-19	16.9	17.6	21.2	16.4	20.5	18.2	874
Religion							
Catholic	36.8	26.4	30.0	67.5	35.6	39.2	1879
Anglican	25.5	37.1	21.1	18.2	43.4	31.8	1393
Pentecostal	14.8	13.0	20.7	6.3	12.7	12.8	600
Muslim	19.1	15.8	26.7	7.9	5.2	13.1	694
Other Christians: i.e. SDA, JW.	1.9	4.1	11.7	0	1.3	1.9	79
Other (i.e. No religion, traditional)	*2.0	0.6	*0.2	*0.1	*1.8	1.2	60

Table 2b shows adolescents' schooling and employment characteristics. Overall, 98.8% (n=4632) reported to have ever attended school, nearly universal in all regions except North which reported 95%. Fewer adolescents were currently attending school 82.3%; highest in East (87%) and lowest in Western, 78.3%. Among adolescents who had ever attended school and were currently in school, almost half (48%) reported history of failing a class, with highest percentage recorded in the Western region (54%) and lowest in Kampala (24%). The percentage of adolescents who had ever been engaged in productive work was high at (40.3%; mainly in West 42.8% and lowest in East, 35.6%).

Table 2b: Schooling and employment status

	Region (%)						Total
Characteristic	Central	East	Kampala	North	Western	%	Unweighted count
Total	100.0	100.0	100.0	100.0	100.0	100.0	4715
Education							
Ever attended school	99.9	99.5	99.7	95.2	98.9	98.8	4632
Currently in school	81.8	87.9	78.6	83.2	78.3	82.3	3802
Ever failed a class	40.3	52.4	24.5	51.7	54.0	48.0	1679
Ever worked in the past 12 months							
Yes	41.8	35.6	38.9	41.7	42.8	40.3	1897
No	58.2	64.4	61.2	58.3	57.2	59.7	2797

Table 2c shows orphan status and living arrangement characteristics. Eighty three percent were non-orphans; lowest in Kampala 78.6%, and highest in East 87.3%. Paternal orphan-hood was the commonest, 11.4% while maternal orphan-hood was 3% and double-orphan-hood stood at 2.4%. Four in every five (81.8%) adolescents were co-residents with at least one parent. Sharing of a bedroom was quite common, 17.1% (12.5% with other relatives who were not siblings or relatives while 4.6% was with parents).

Table 2c: Orphanhood status and living arrangement characteristics

Characteristic	Region (%)					Total	
	Central	Eastern	Kampala	Northern	Western	%	Un-weighted count
Total	100.0	100.0	100.0	100.0	100.0	100.0	4715
Parental status							
Both alive	82.4	87.3	78.6	79.4	83.6	83.2	3845
Only mother alive	11.6	9.0	13.4	14.3	11.2	11.4	557
Only father alive	3.6	2.6	4.0	2.5	2.9	3.0	151
Both not alive	2.4	1.2	3.9	3.8	2.3	2.4	121
Adolescent current co-residence							
Both parents	44.2	59.4	35.2	66.1	55.8	65.1	2508
Single parent	27.7	20.2	34.3	18.6	20.5	16.7	1126
Guardian(s)	18.0	13.6	15.9	8.6	11.2	10.7	605
Self	2.1	2.3	4.6	1.2	2.3	1.7	103
Other (Friend, sibling)	8.0	4.5	10.0	5.5	10.2	5.8	361
Shared bedroom with whom$^{\pi}$							
Sibling	85.6	80.8	85.0	82.3	80.8	82.9	721
Parent	2.8	6.1	9.3	5.7	3.5	4.6	43
Other (i.e. Relative)	11.6	13.1	5.7	12.0	15.8	12.5	96

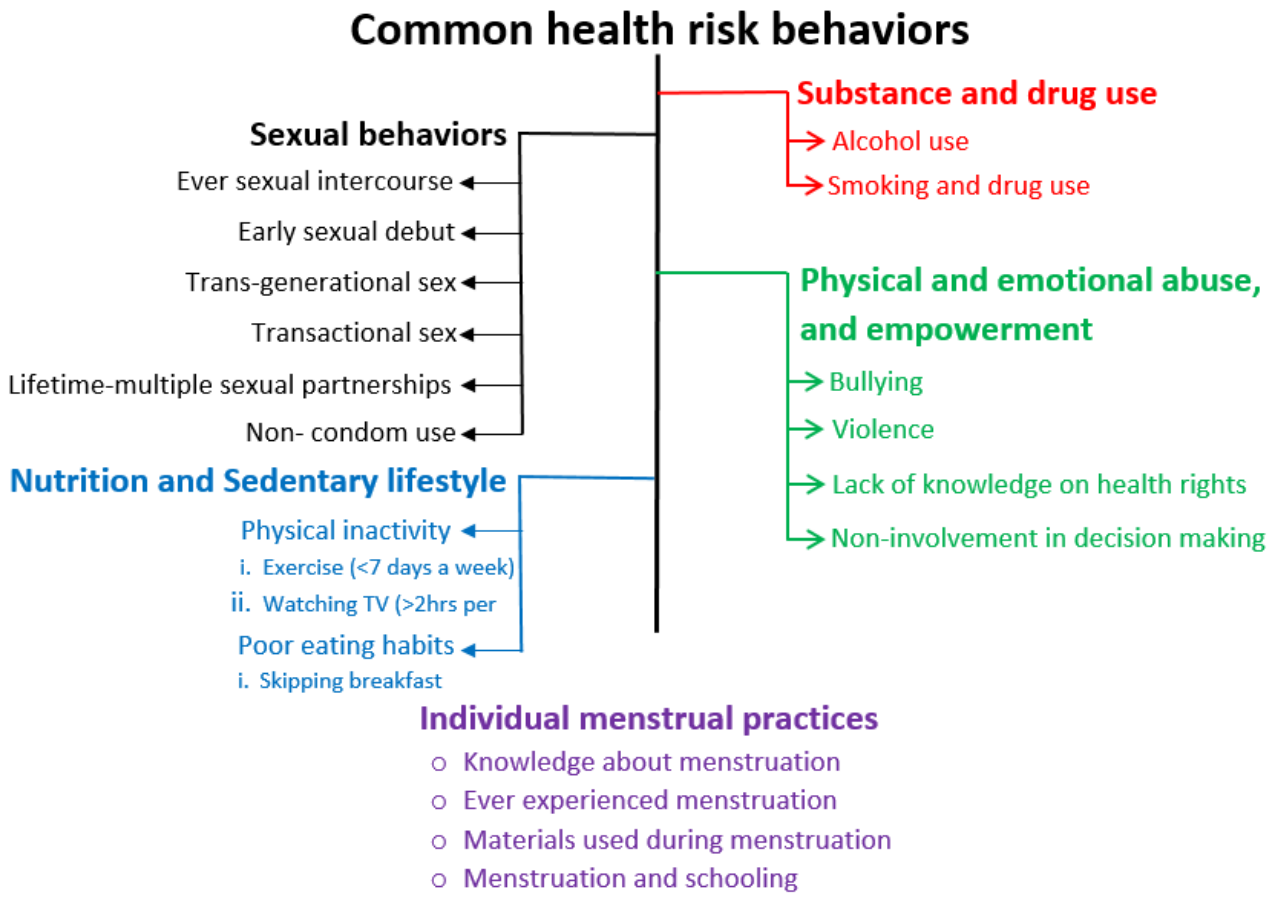
Summary

This study found that 16.8% of the adolescents were orphaned and this findings is similar to that of the 2014 National Housing and Population Census (NHPC) where 16.4% of children aged between 13 and 17 years were orphans [20]. Enrolment in primary schools was almost universal and this could be attributed to the universal primary.[22]. The percentage of adolescents who reported to have never attended school were 1.2% lower than 4.1% and those currently in school were 82.3% higher than 73.9% reported in the 2014 NHPC. This could have been due to difference in age categories interviewed. This study used adolescents aged 10-19 years whereas

the 2014 NPHC had adolescents aged 13-18 years. The percentage of adolescents working was high (40.3%) and this was close to what was found in the 2014 NHPC (43.6%). In this study working was defined as doing any activity to earn money or obtain food in the past 12 months. This could mean that adolescents are looking for avenues of earning to meet various needs other than depending on their parents/guardians. This calls for support from parents/guardians and other stakeholders to support the adolescents so as not to be exploited and deviated from pursuing their education and career aspirations [23].

5.2. COMMON ADOLESCENT HEALTH RISK BEHAVIOURS

The common health risk behaviors are summarized in the illustration below;



Source: Illustration developed for this report.

5.2.1. Substance and illicit drug use

Alcohol use and associated factors

Overall, 17% of adolescents had ever drunk alcohols and this was significantly higher in males (18.8%) than females (15.4%) p=0.0143 (Table 3). History of ever drunk alcohol was higher in urban settings relative to rural ones, irrespective of sex and age. However, among older adolescents in urban settings, having ever drunk alcohol was higher in females (41.1%) relative to males (20.7), p<0.001. Overall, half of the adolescents reported initiating alcohol drinking at 12 years. The main source of alcohol was from older persons (46.5%) and other sources included peers (19.6%), shops (15%) and other sources such as parties, home brew and stealing (18.9%). Peer pressure, (31.1%), curiosity (28.5%) and parent/guardian's behavior (20.1%) commonly influenced the adolescents initiation of alcohol drinking.

Adolescent ever use of alcohol was common (17%), but use in past 30 days was low (2.2%).

Having ever drunk alcohol was 26% lower for the adolescents who were in-school compared to those who were out-of-school, adjusted Prevalence Ratio (adj. PR) =0.74; 95% CI [0.61, 0.91], p= 0.004 (Table: 4). Having ever drunk alcohol was significantly higher among males relative to females, adj. PR=1.25; 95% CI (1.06, 1.47), p= 0.006 and among older adolescents (15-17 and 18-19 years) adj.PR 1.58; 95% CI(1.29,1.94), p<0.001 and adj.PR 2.33; 95% CI(1.73,3.14), p<0.001 respectively compared to the younger ones (10-14 years). Single orphan-hood adj. PR=1.29; 95% CI (1.08, 1.54), p=0.005 relative to being with both parents. Having ever drunk alcohol did not statistically differ by region or area of residence.

Although alcohol consumption in the last 30 days was generally low (2.2%), it was significantly higher in males (2.9%) relative to females (1.6%), p=0.004. Among older (18-19 years) adolescents in rural, male (8%) used alcohol more than females (3.8%), p=0.035, while among the urban settings sex differences were only significant among young (10-14 years)

Risk factors for alcohol use included; being out-of-school, orphan-hood, older age, male, residing in the western region.

adolescents with males (2.6%) reporting higher use relative to females (0.6%), p=0.037. Factors significantly associated with higher chances of recent (past 30 days) alcohol use were being male adj. PR=2.12 (1.28, 3.49), older age (18-19 years) adj. PR=3.30 (1.28, 8.50), and residence in Eastern, Northern and Western geographical regions. Enrollment in school at the time of the survey was associated with being less likely to consume alcohol (Table 5).

Table 3: Adolescents who had ever drunk alcohol

	Female			**Male**			**All combined**	
	Rural, n=1697	**Urban, n=845**	**Total**	**Rural, n=1549**	**Urban, n=605**	**Total**		
	%	%	%	%	%	%	N	%
Overall	12.2	15.1	12.8	14.3	21.2	15.2	4696	13.9
Age								
10/14	7.9	11.5	8.4	9.1	12.4	9.5	2626	8.9
15/17	13.5	15.9	14.0	16.3	24.6	17.5	1302	15.7
18/19	28.0	20.7	25.9	28.3	41.1	30.3	769	28.0

Table 4: Adjusted Prevalence Ratios of factors associated with ever drunk alcohol (n= 4599)

	Adj. PR	95%CI		p-value
Current school enrolment				
Not in school	1.0			
Yes, in School	**0.74**	**0.61**	**0.91**	**0.004**
Sex				
Female	1.0			
Male	**1.25**	**1.06**	**1.47**	**0.006**
Age (years)				
10-14	1.0			
15-17	**1.58**	**1.29**	**1.94**	**<0.001**
18-19	**2.33**	**1.73**	**3.14**	**<0.001**
Orphan-hood				
Both alive				
Single-orphan	**1.29**	**1.08**	**1.54**	**0.005**
Double-orphan	1.02	0.68	1.54	0.93
Building materials (roof/walls)				
None modern	1.0			
Mixed	0.92	0.65	1.30	0.64
Modern-only	1.04	0.77	1.41	0.80
Type of location				
Rural	1.0			
Urban	1.13	0.79	1.62	0.49
Region				
Central	1.0			
Eastern	0.61	0.26	1.47	0.27
Kampala	0.82	0.57	1.18	0.28
Northern	0.90	0.58	1.39	0.63
Western	1.33	0.99	1.78	0.06
_cons	0.12	0.07	0.20	<0.001

Table 5: Adjusted Prevalence Ratios of factors associated with use of alcohol in past 30 days (n=4,573)

	Adj. PR	95%CI		p-value
Current School enrolment				
Not in school	1.0			
Yes, in School	**0.28**	**0.14**	**0.57**	**0.001**
Sex				
Female	1.0			
Male	**2.12**	**1.28**	**3.49**	**0.003**
Age (years)				
10-14	1.0			
15-17	1.35	0.70	2.61	0.369
18-19	**3.30**	**1.28**	**8.50**	**0.013**
Orphan-hood				
Both alive	1.0			
Single-orphan	1.36	0.83	2.20	0.22
Double-orphan	1.93	0.86	4.30	0.109
Building materials (roof/walls)				
None modern	1.0			
Mixed	0.91	0.33	2.49	0.853
Modern-only	1.15	0.48	2.79	0.754
Type of location				
Rural	1.0			
Urban	1.99	0.95	4.16	0.067
Region				
Central	1.0			
Eastern	**5.51**	**1.59**	**19.06**	**0.007**
Kampala	0.92	0.29	2.93	0.893
Northern	**5.10**	**1.61**	**16.09**	**0.005**
Western	**4.57**	**1.34**	**15.58**	**0.015**
_cons	0.00	0.00	0.02	<0.001

Smoking and drug use

The percentage of adolescents who reported ever having attempted to smoke any substance was 1.6%, while those who were currently smoking was at 0.5%. However, the percentage of current adolescent male smokers (0.72%) was significantly higher than female current smokers (0.12%), p=0.0014. The percentage who ever attempted to smoke in the rural area was significantly higher among young adolescents females (3.1%) relative to their male counterparts (0.9%), p=0.0018; conversely, male smokers were significantly higher than females in the rural setting among 15-17 year old adolescents (2.3% vs 0.4% respectively, p=0.0110). In the urban setting, the percentage of adolescents aged 15-19 years who smoked was significantly higher in males than females. Also orphan hood was associated with higher chance of smoking. Tobacco/ cigarette was the most common material smoked (~90%). Use of Shisha was common in the urban (7.4%) while other substances were marijuana/paper/grass such as *striga hermonthica* (purple witch weed), *paspalum* in rural (22.3%) and only 5.1% in the urban. The overall median age (IQR) at initiation of smoking was 13 years (11, 16), and was higher in the urban (16 years) relative to rural (12 years). Factors associated with smoking were; orphan hood, being male, out-of-school and older than 14 years. The main sources of substances smoked were shops (57.5%) and older persons/peers (35.5%). Peer pressure (63.4%), curiosity (22.3%) and boredom (4%) commonly influenced the adolescents to smoke.

Having ever a smoking behavior was 1.6%, while recent smoking was 0.5%. Tobacco/ cigarette (90%) was the most commonly used, shisha (7%) in urban, while marihuana/grass (19%) in rural. Risk factors included orphan-hood, older age, and being male

Summary

Overall, adolescents who had ever taken alcohol were common at 14% but those who had taken alcohol in the past 30 days were few (2.2%). Adolescents who were males, older, or residing in East, North and Western Uganda had higher chances of having drunk alcohol in the past 30 days. A national NCD survey among adults had similar findings where male participants and residents in western Uganda were more likely to be medium- to high-end alcohol users [24].

Smoking was low (1.9%), with tobacco being the commonest (90%) material smoked followed by marijuana/paper/grass (19%). Adolescents are using other substances such as certain types of plants (e.g. as *striga, hermonthica* (purple witchweed), *paspalum*) especially in rural areas. It is important to note that adolescents are smoking various substances, with half in the rural settings starting at the age of 12 years or below. Innovative approaches should be used to curb the influence of peers, parents/guardians and curiosity on substance and drug use.

5.2.2. SEXUAL RISK BEHAVIOURS

Sexual debut (*Sexual encounter at any age between 10-19 years of age)*

Overall, about one in five adolescents (21.5%) reported ever having initiated sex regardless of their schooling. Ever having had sex debut by the time of the survey did not differ by residence. However, a high percentage of adolescents in the rural compared to urban tended to report sex debut, with the young (10-14), 7% vs 2.7%, $p<0.001$, and 15-17 year-olds, 23.7% vs 19%, $p=0.0533$ (Table 6a1). Having ever had sex was 6.1% in young adolescents (10-14 years), 22.6% among 15-17 year-olds and 64.9% in adolescents aged 18-19 years. Self-reported sexual debut was significantly more common among adolescents who dropped out of schooling (60.5%) compared to those who were never in school (37%, $p<0.001$) or those currently in school (12.9%, $p<0.001$) as shown in Table 6a2. As well-known from previous studies, the percentage of those reporting to have ever had had sex is higher in older ages, irrespective of schooling status.

Figure 4 shows percentages of adolescents who ever had sex by age, schooling status and gender. Among adolescents who had never been in school or stopped schooling, a higher percentage of females reported sex debut compared to males at all ages, except at age 10-14 years who never went to school where only males reported ever sex debut. However, among those currently in schools, a higher percentage of males tended to report ever sex compared to their female counter-parts.

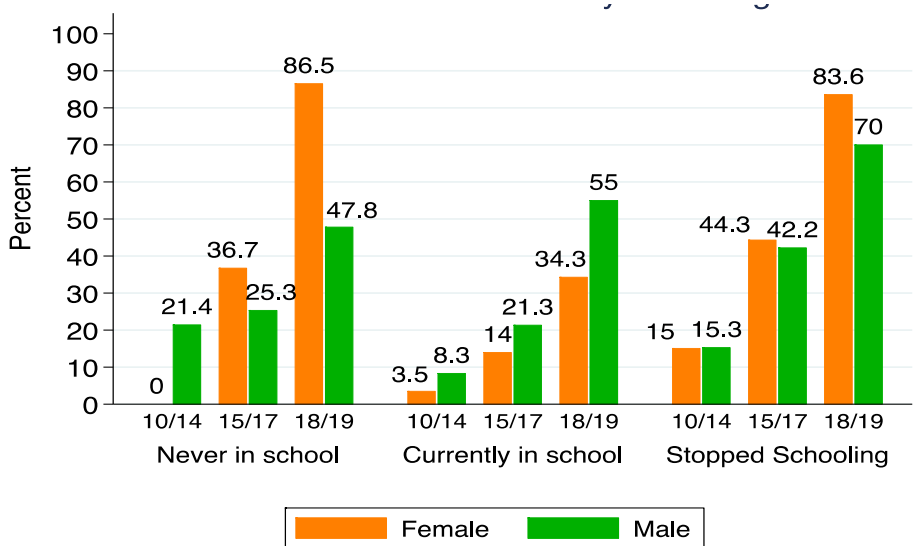
Table 6a1: Number and percentage of ever had sex by age and residence

	All		Rural		Urban	
	N	%	n	%	n	%
Total	4673	21.6	3230	21.7	1443	21.1
Age						
10-14	2488	6.1	1772	7.0	693	2.7
15-17	1329	22.6	905	23.7	431	19.0
18-19	856	64.9	553	65.5	319	63.6

Table 6a2: Number and percentage of ever had sex by age and schooling status

			Age group					
	All		10-14		15-17		18-19	
	N	%	n	%	n	%	n	%
Total	4655	21.5	2482	6.1	1325	22.6	849	64.9
School Status								
Never in School	77	37.0	27	8.0	25	31.6	25	73.9
Currently enrolled	3760	12.9	2353	5.7	1048	17.4	359	46.4
Stopped school	818	60.5	95	14.9	253	43.5	470	78.8

Figure 4: Adolescents who ever had sexual intercourse by schooling status, age category and sex



Factors associated with having ever had sexual intercourse

Table 7 shows prevalence ratios of factors associated with ever having had sex. Ever having had sex was higher among adolescents who were not in school (57.3%) compared to those in-school (11.7%), adolescents who were older (18-19 years), 64% and 15-17 year-olds, 20.9%, or double orphan-hood 42.7%, single orphan-hood 28.6% and high both in Eastern (23%) and Western (26%) regions. Factors associated with high prevalence of sex debut were being older (18-19), adj. PR=6.89 (5.45, 8.72) or 15-17 years adj. PR=3.32 (2.57, 4.28) compared to young (10-14) adolescents, being a double orphan adj. PR=1.36(1.01, 1.82) and ever married, adj. PR=1.40 (1.19, 1.65). Female adolescents who were still in school were 64% less likely to have ever had sexual intercourse compared to out-of-school, adj. PR= 0.36; 95% CI (0.28, 0.47), p = <0.001. The difference in the prevalence of ever having had sex comparing males to females was 84% higher among in-school relative to out-of-school adolescents, adj. PR=1.84 (1.40, 2.43).

Table 7: Adjusted Prevalence Ratios of factors associated with ever having had sex (n=4,499)

	Prevalence of ever sex	Prevalence Ratio	95%CI		p-value
Current School enrolment					
Not in school	57.3	1.0			
Yes, in School	11.7	***0.36***	***0.28***	***0.47***	***<0.001***
Sex					
Female	18.8	1.0			
Male	21.6	1.03	0.87	1.23	0.72
Interaction					
In school # Male		***1.84***	***1.40***	***2.43***	***<0.001***
Age(years)					
10-14	5.3	1.0			
15-17	20.9	***3.32***	***2.57***	***4.28***	***<0.001***
18-19	64.1	***6.89***	***5.45***	***8.72***	***<0.001***
Orphan-hood status					
None orphan	18.0	1.0			
Single	28.6	1.09	0.92	1.30	0.306
Double	42.7	***1.36***	***1.01***	***1.82***	***0.041***
Ever married					
No	17.0	1.0			
Yes	99.4	***1.40***	***1.19***	***1.65***	***<0.001***
Building materials (roof/walls)					
None modern	20.5	1.0			
Mixed	20.7	1.00	0.81	1.24	0.989
Modern-only	19.4	1.05	0.85	1.30	0.649
Type of location					
Rural	20.0	1.0			
Urban	20.5	0.96	0.80	1.14	0.633
Region					
Central	15.9	1.0			
Eastern	23.0	1.53	1.24	1.88	<0.001
Kampala	18.4	1.05	0.81	1.35	0.721
Northern	12.1	0.75	0.55	1.01	0.061
Western	26.3	1.40	1.11	1.78	0.006
_cons		0.08	0.06	0.12	<0.001
N		4499			

Early sexual debut (sexual encounter before 15 years of age)

Table 8a shows results on early sexual debut (sex debut before age of 15 years) by current age, residence and sex. Although 21.5% of adolescents had initiated sex, overall 7.8% started sexual intercourse before the age of 15 years, and this was significantly higher among males (10.4%) relative for females (5.6%), p<0.001. There was also a significantly higher percent of adolescents initiating sex in the rural (8.4%) compared to those urban areas (5.6%, p= 0.0008). The youngest age of early sexual debut reported was 6 years and the oldest was 19 years. The percent reporting early sexual debut was significantly higher in males 10.3% compared to females, 5.6%, p<0.001; these differences persisted across all ages. Table 7b shows early sexual debut by schooling status. The percent of adolescent not currently in school but reporting early sex debut is higher than adolescents currently enrolled in school.

Table 8a: Early sexual debut by current age, residence and sex

	All		**Rural**		**Urban**		**Females**		**Males**	
	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %
Total	4654	7.8	3217	8.4	1437	5.6	2521	5.6	2133	10.3
Age										
10-14	2481	5.8	1767	6.7	692	2.7	1332	3.6	1149	8.3
15-17	1324	9.4	901	10.1	430	7.2	720	7.1	604	12.2
18-19	849	10.8	550	11.3	315	9.6	469	8.7	380	13.4

Table 8b: Early sexual debut among adolescents by school status

	Never in School		**Currently in School**		**Stopped Schooling**	
	N	**Row %**	**N**	**Row %**	**N**	**Row %**
Total	77	13.4	3747	6.3	812	14.1
Age						
10-14	27	8.0	2346	5.4	95	14.9
15-17	25	13.3	1044	7.9	252	15.5
18-19	25	19.3	357	7.6	465	13.1

Factors associated with having ever had early sexual debut

The likelihood of early sexual debut (sex before age 15 years) was 2.5% among girls in school and 10.7% of those not in schools. While in boys early sex debut was 9.7% if enrolled in school but 21.4% for those not in schools. In the urban early sexual debut was 5.5% among boys compared to 5.2% among the girls while in the rural areas, early sex debut was 12.4% in boy compared to 3.8% among girls. Table 8 shows factors associated with early sexual debut. The prevalence of early sexual debut was 52% lower for the in-school compared to out-of-school, adj.PR= 0.48; 95% CI (0.32, 0.72), p=<0.001. The difference in the prevalence of early sexual debut comparing males to females was 47% lower in the rural relative to urban settings, adj. PR=0.53 (0.28, 1.01), p=0.052. In the urban setting, the prevalence of early sexual debut was 2.65 times higher among males relative to females. Early sexual debut was more prevalent in Eastern and Western regions relative to the Central region as shown in table 9 below.

Table 9: Adjusted Prevalence Ratios of factors associated with early sex debut (n=4,486)

Variable	Prevalence Ratio	95%CI		p-value
Current School enrolment				
Not in school	1.0			
Yes, in School	***0.48***	***0.32***	***0.72***	***<0.001***
Sex				
Female	1.0			
Male	***2.65***	***1.87***	***3.76***	***<0.001***
Type of location				
Rural	1.0			
Urban	1.19	0.63	2.24	0.225
Interaction				
In urban# Male	***0.53***	***0.28***	***1.01***	***0.052***
Age(years)				
10-14	1.0			
15-17	1.34	0.90	1.98	0.151
18-19	***1.11***	***0.68***	***1.83***	***0.669***
Ever married				
No	1.0			
Yes	***2.05***	***1.06***	***3.93***	***0.032***
Building materials (roof/walls)				
None modern	1.0			
Mixed	1.00	0.64	1.56	1.00
Modern-only	1.00	0.60	1.66	0.995
Orphanhood				
Non-orphan	1			
Single	0.89	0.56	1.40	0.608
Double	1.81	0.99	3.33	0.054
Region				
Central	1.0			
Eastern	***1.41***	***0.95***	***2.09***	***0.092***
Kampala	0.74	0.40	1.40	0.356
Northern	0.63	0.36	1.11	0.113
Western	***1.58***	***1.00***	***2.49***	***0.049***
_cons	***0.05***	***0.03***	***0.11***	***<0.001***

Transactional sex

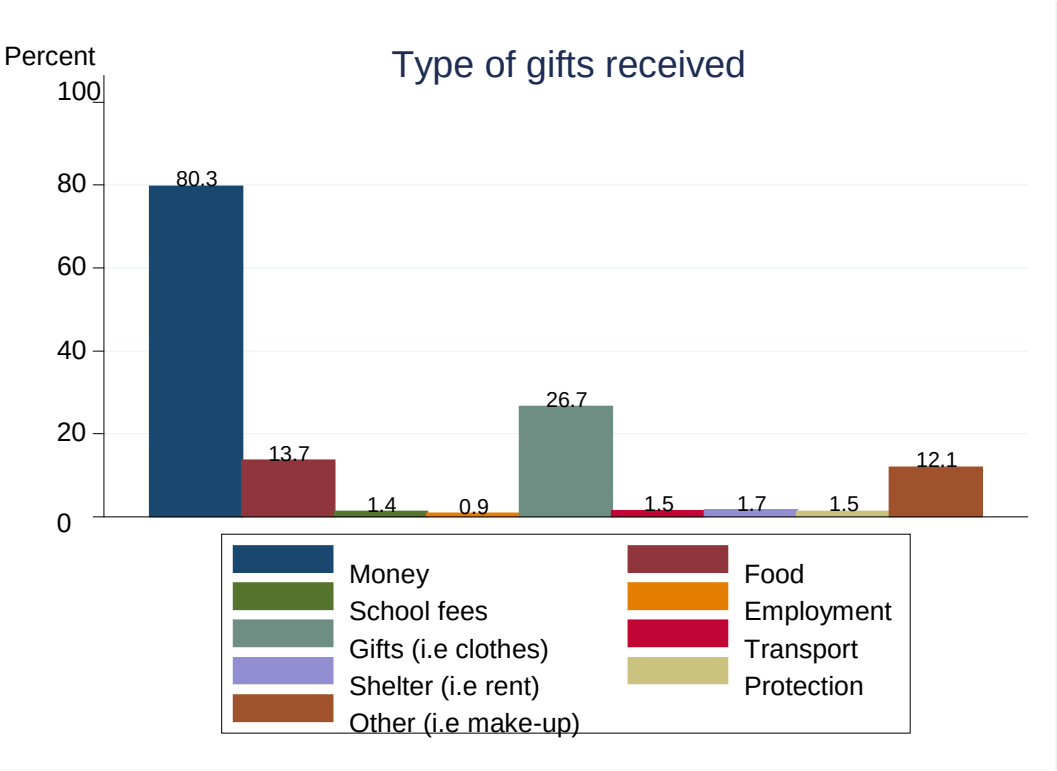
Table 10 shows sexually active adolescents who had ever been involved in transactional sex. Over a quarter (26.9%) of sexually active reported ever having been involved in exchange of gifts for sex, more common in females (42.3%) compared to males (9.5%), irrespective of schooling status. Half (50.8%) of females currently in school reported this behavior compared to their counterparts who stopped schooling (33.7%); however, no such differences were observed among males where 9% reported this behavior. Older (18-19 years) females and males were less likely to engage in transactional sex than younger ones among the currently enrolled in school.

Table 10: Adolescents who ever had transactional sex (among sexually active)

	Currently in school						Stopped Schooling					
	Female		Male		Total		Female		Male		Total	
Overall	165	50.8	293	9.1	458	23.7	319	33.7	156	9.8	475	23.9
Age category (years)												
10-14	34	44.6	106	8.7	141	17.3	4	39.4	5	14.6	10	24.5
15-17	88	61.6	82	12.4	169	37.4	67	35.0	52	6.1	124	19.7
18-19	43	33.6	105	6.9	148	14.3	248	33.2	99	11.5	341	25.4

Money was the commonest (80.3 %) type of gift received by sexually active adolescents in exchange for sex. Clothes, food and others gifts like make-up as illustrated in Figure 5.

Figure 5: Category of gifts adolescents received in exchange for sex



Lifetime multiple sexual partnerships

Table 11 depicts lifetime multiple sexual partners (2+) by residence, age and sex. Overall, 44% of adolescents who had ever initiated sex had multiple (2+) sex partners, similar between rural (44%) and urban (42.4%) residences but higher among males (54.5%) than females (33.8%), p<0.001. Differences between males and females persisted at all ages. However, a significantly higher percentage of 10-14 year old adolescents reported multiple partners in rural (38.7%) than urban (13.2%), p=0.0350. A higher percentage of male adolescents across all ages, residence and schooling status tended to report multiple partners compared to girls figures 3 and 4.

Table 11: Lifetime multiple partners (2+) by residence, age and sex

	All		Rural		Urban		Females		Male	
	N	%	n	%	n	%	n	%	N	%
Total	948	43.6	666	44.0	282	42.4	504	33.8	444	54.5
Age Category										
10-14	142	36.2	118	38.7	18	13.2	50	29.8	92	39.5
15-17	285	43.3	206	44.1	77	40.6	142	34.3	142	52.1
18-19	521	45.8	343	45.7	187	45.9	312	34.2	210	62.6

Figure 6: Lifetime multiple sexual partnerships among adolescents by age, sex and residence

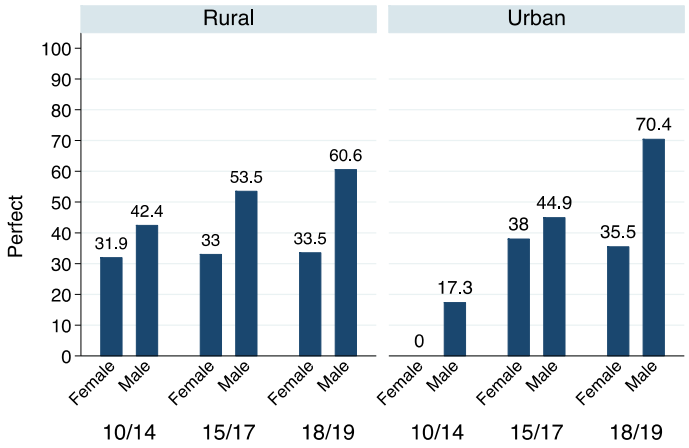
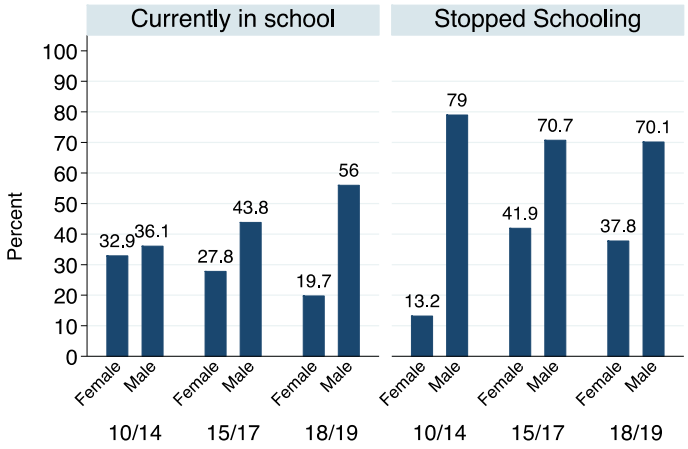


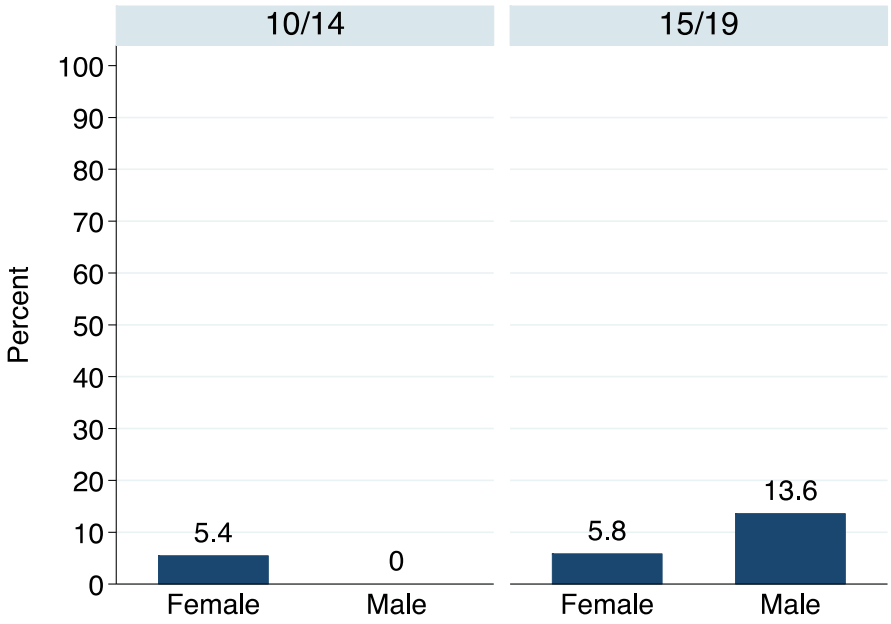
Figure 7: Lifetime multiple sexual partnerships among adolescents by age, sex and schooling status



Transgenerational sex (partners older by ≥10 years) among unmarried adolescents

Overall, 7.1% of the sexually active unmarried adolescents reporting having sexual partners who were older by at least 10 years. Figure 8 shows transgenerational sex among unmarried adolescents by sex and age category status. The percentage of 15-19 year old adolescents reporting older sexual partners was higher than among males (13.6%) compared to females (5.8). The percent reporting older partners was higher among female adolescents (5.4%) compared to males (0%) aged 10-14 years.

Figure 8: Adolescents who had sex with older partner by sex and age category

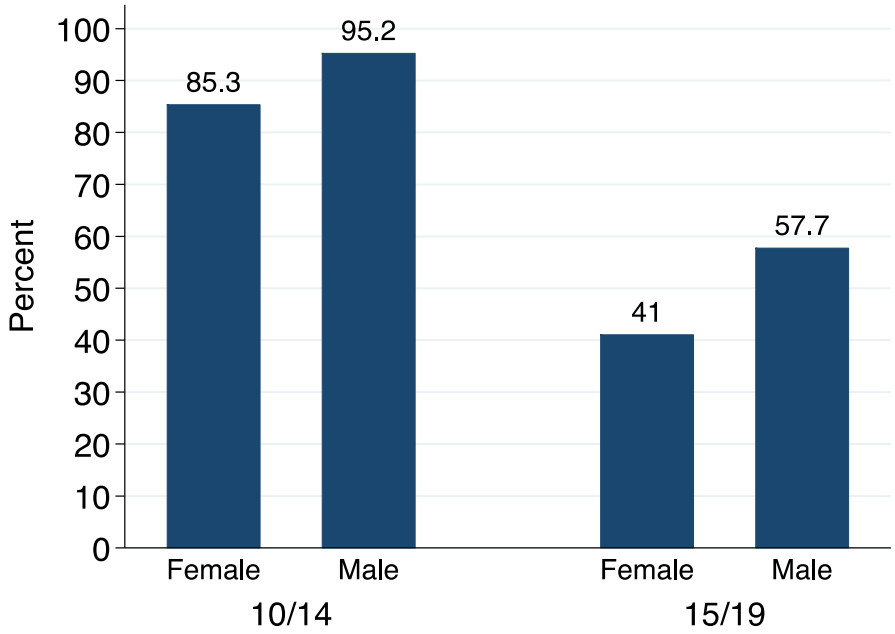


Non condom use

Non-use of condoms was 57.3% among the sexually active unmarried adolescents at the last sexual encounter. Figure 9 shows non-use of condoms at last sexual encounter among sexually active adolescents by sex and age category.

More male adolescents (95.2%) compared to female (85.3%) reported not using a condom at the last sexual encounter in the 10-14 year age category. The same trend was observed in the 15-19 year age category

Figure 9: Non-use of condoms at last sexual encounter by age category and sex



Summary

Ever having had sexual intercourse in the entire lifetime among adolescents was 21.5%. This overall percentage was not so higher than the usually cited estimated. This study included the younger adolescents (10-14 years) where only a few (7%) had ever had sex compared to the older adolescents. Though this is a modest percentage it is important to ensure that adolescents

delay sex debut bearing in mind the many negative consequences having sex. It is noteworthy that ever having had sex intercourse was high among adolescents not in school (60%) and 37% among those who had never been in school. Being in school and having a parent/parents was associated with delay of sexual debut.

Early sexual debut (sex before 15 years of age) was reported by 10% of adolescents aged 15-19 years. Early sexual was more common among those in the rural (10.6%) compared to urban (8.2%) areas and higher in adolescents not in school (never in school at 15.9%, those who stopped schooling at 14.0% compared to adolescents who were currently (7.8%). These finding are similar to studies done in sub-Saharan countries[25, 26]. Schooling and being male were a lower prevalence of having had early sexual debut. It is therefore important to ensure that adolescents attend and remain in school. Female adolescents should have special interventions since they are more vulnerable.

Transactional sex defined as the exchange of gifts or money for sex has been indicated as a common practice among adolescents throughout sub-Saharan Africa [27, 28]. Consequently, adolescent females may experience a higher risk of becoming pregnant and contracting sexually transmitted infections including HIV/AIDS as they have little negotiating power with their older partners to insist on condom use[29].

Overall, trans-generational sexual relations were 7.8% and reported higher (7.9%) in the older 15-19 adolescents compared to the younger ones (3.5%). This is slightly higher than the proportion obtained in a multi-country study done in sub- Saharan Africa which showed trans-generational sex at a range of 2-6% among older adolescents[25].

Though condom use prevents STIs and unwanted pregnancy if used correctly, studies have indicated that condom use is still low (give a figure) among sexually active adolescents with multiple sexual partners [30]. In this study condom use among sexually active non- married adolescents was at 42.7%. Contrary to previous studies, condom use was lower in male compared to female adolescents. There is need to implement in and out of school based adolescent responsive programs so as to reduce sexual risk behaviours among adolescents [31].

5.2.3. PHYSICAL & EMOTIONAL ABUSE, AND EMPOWERMENT AMONG ADOLESCENTS

Bullying, violence, rights and decision-making are some of the attributes that influence adolescent behavior. This chapter highlights some of the key findings.

Bullying

History of being ever bullied was reported by 39.1% of 4422 adolescents. Majority (49%) of those who reported history of being bullied were males living in urban setting in the age category of 18-19 years. The prevalence of bullying was not statistically different between in-school and out-of-school adolescents (39.1% vs 41.0%, p=0.325). Bullying was reported higher among adolescents aged 15-19 years (42.4%) compared to those aged 10-14 years (36.3%). The most common form of bullying reported was teasing such as hiding books which was reported by 46.8% of adolescents (Table 12). On disaggregation by sex, teasing remained the most common form of bullying followed by spreading rumours among females and being pushed among males.

Table 12: Percentage of bullying by sex and residence

	Female			Male			All combined	
	Rural, n=1874	**Urban, n=663**	**Total**	**Rural, n=1712**	**Urban, n=173**	**Total**		
	%	%	%	%	%	%	N	%
Overall	35.6	40.0	36.7	42.7	39.2	42.0	4715	39.1
Variable								
Age [a]								
10/14	33.7	36.6	34.3	40.7	31.1	38.7	2478	36.3
15/17	34.9	44.8	37.7	44.8	47.7	45.4	1359	41.3
18/19	43.4	39.8	45.7	45.7	49.0	46.4	874	44.0
Region								
Central	42.3	43.7	42.7	49.0	34.1	44.9	1045	43.7
East	30.6	39.1	32.1	32.0	51.6	34.6	1079	33.2
Kampala	--	38.3	38.3		38.9	38.9	660	38.5
North	31.9	34.3	32.3	40.3	50.4	41.4	925	37.1
Western	36.5	38.5	36.8	48.9	31.7	46.8	1006	41.6
Forms of bullying*								
Tease (i.e. Hiding books)	62.5	76.9	66.4	74.2	76.6	74.7	840	46.8
Shoved/Pushed	15.7	4.2	12.6	13.8	8.2	12.7	219	12.2
Beaten	9.3	9.8	9.4	11.6	14.2	12.1	232	12.9
Spread rumors	18.7	9.4	16.2	7.0	3.6	6.3	266	14.8
Other (i.e. Forced to smoke)	7.8	7.9	7.9	11.9	8.7	11.3	238	13.2

The differences between male and female percentages were noted to be statistically significantly with a p-value of <0.001, figure 10. There was no significant difference between adolescents in

the urban versus rural areas regarding history of being ever bullied. History of bullying was more reported among older adolescents compared to the younger ones, Figure 11.

Figure 10: Percentage of ever having been bullied by gender

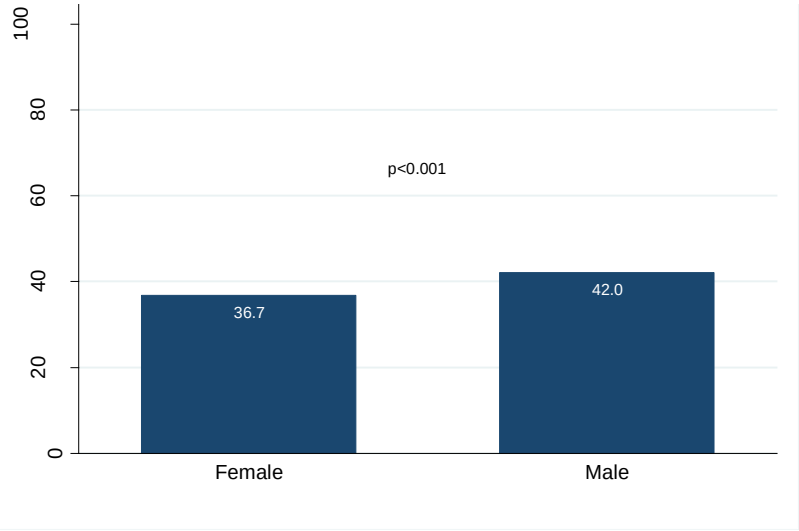
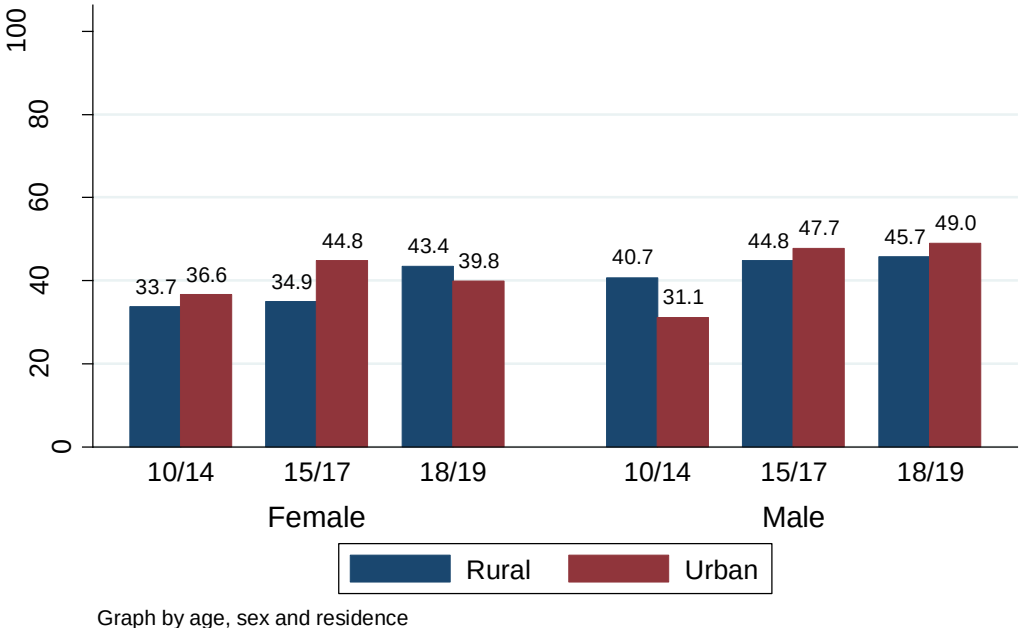


Figure 11: Percentage of bullying by age, sex and residence

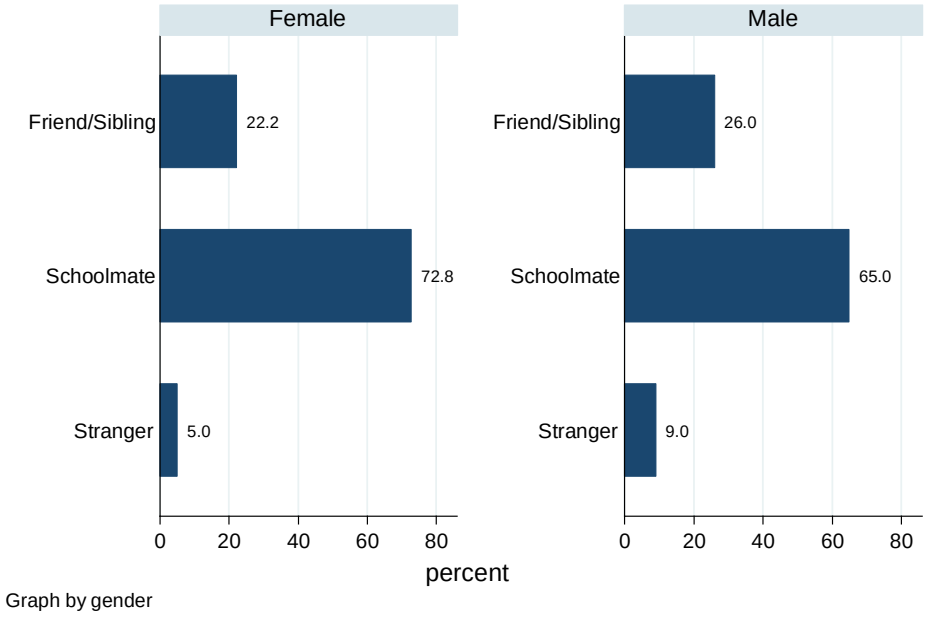


Graph by age, sex and residence

The most commonly reported instigators of bullying were schoolmates among boys (65%) and girls (72.8%), shown in figure 12. Friends/siblings as instigators of bullying were also reported

by females (22.2%) and males (26%), so was bullying by strangers males (9%) and females (5%). Over 60% of the bullying was reported to happen in schools. Slightly over 70% of the in school adolescents reported to have experienced bullying compared to 63% among the out-of-school group. Only 2% of all the adolescents who have ever been bullied, reported ever been bullied to someone. Being aged 15-19 years [adj. PR 1.13 (1.04, 1.23)], male [adj. PR 1.17 (1.08, 1.27)], having failed a class [adj. PR 1.09 (1.01, 1.19)] and having ever run away from home [adj. PR 1.43 (1.28, 1.61)] were significantly associated with a higher prevalence of having ever been bullied. There were significant associations by region; Western [adj. PR 0.87 (0.77, 0.98)], Eastern [adj. PR 0.68 (0.60, 0.76)], and Northern [adj. PR 0.83 (0.73, 0.94)], adjusting for residence and orphan status.

Figure 12: Perpetrators of bullying among adolescents by sex



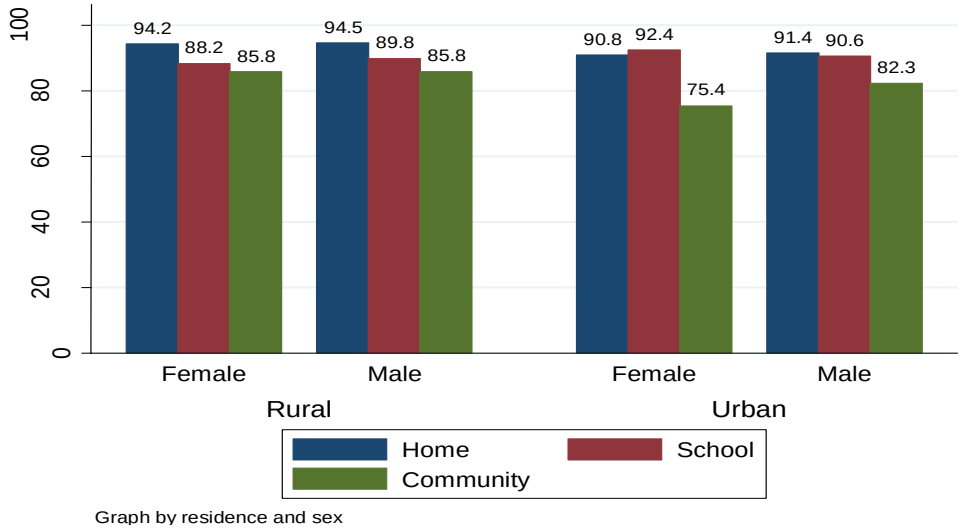
Summary

Research shows that chronic victims of bullying experience more physical and psychological problems than their peers who are not harassed by other children [32] and they tend not to grow out of the role of victim. Studies also suggest that chronically victimized students may as adults be at increased risk for depression, poor self-esteem, and other mental health problems [33]. Studies suggest that bullying in early childhood may be a critical risk factor for the development of future problems with violence and delinquency. There is need to initiate interventions that prevent bullying in schools and communities at an early age due to its harmful effects on victims, and its chilling effects on school climate.

Violence

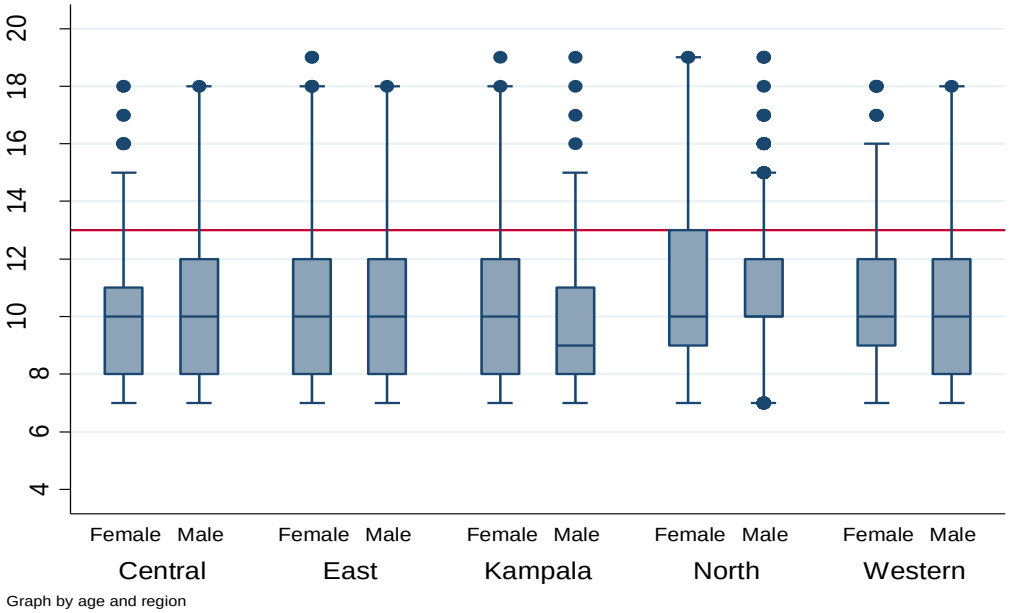
In this study, three forms of violence where assessed namely physical, sexual and emotional. Any violence that was against female adolescents was considered to be gender base violence. Adolescents reported to feel safer at home, followed by school and the community. Females feeling safe from gender based violence was higher in rural (86%) relative to the urban (75%) as shown in Figure 13. However, feeling unsafe at home was more commonly reported by older age group (4.8%) compared to the young ones (8.9%).

Figure 13: Proportion of adolescents' feeling of safety in the home, school and community by gender



The lowest age reported of first episode of physical violence was of 7 years irrespective of gender and region. In addition, half of adolescents across all regions reported to have experienced violence by the age of 10 years except for males in Kampala, Figure 14.

Figure 14: Age at first episode of violence by region and gender



Overall, 73% of the adolescents reported to have experienced at least one of the three forms of violence (physical, sexual and emotional). Physical violence was the most commonly reported (60%) followed by emotional violence (41.5%), Table 13. Eighty percent of adolescents reported history of violence in the western region and the percentage remained high when disaggregated by all forms of violence studied. Adolescents who were not in school reported a higher percentage of violence (79%) when compared to those who were in school (72.1%), $p<0.001$. Adolescents who had lost both parents (double orphan hood) reported higher (83.1%) percent of history of violence when compared to adolescent who had at least one parent (Double 69.9% vs single 75.7%). Also shown in table 13, adolescents who were living by themselves reported the highest percent (27.2%) of sexual violence than adolescents living elsewhere.

Table 13: Forms of violence reported by adolescents

	Violence				
	Physical	**Emotion**	**Sexual**	**Overall**	
				Un-weighted N	%
	60.0	41.5	9.6	4715	73.0
Age group (Years)					
10/14	58.9	38.0	4.0	2478	69.9
15/19	61.3	45.6	16.1	2233	76.7
Sex					
Female	55.5	40.6	13.9	2545	70.5
Male	65.3	42.8	4.7	2156	75.9
Region					
Central	63.7	48.2	10.6	1045	79.3
Eastern	55.8	30.4	9.6	1079	66.5
Kampala	61.6	39.0	9.4	660	74.7
Northern	47.1	32.2	3.0	925	59.1
Western	67.6	51.1	12.7	1006	80.7
Residence					
Rural	59.5	41.6	9.6	3262	72.1
Urban	61.7	41.4	10.0	2453	74.8
Currently in school					
Yes	59.5	39.9	7.5	3802	72.1
No	65.0	49.8	19.3	821	79.0
Orphan status					
Not an orphan	59.5	40.4	8.8	3845	72.3
Single orphan	63.3	46.1	13.9	708	75.7
Double orphan	63.0	55.8	11.6	121	83.1
Currently live with					
Both parents	57.4	37.3	7.2	2508	69.9
Single parent	61.6	43.1	11.0	1126	75.0
Guardian (i.e Uncle)	65.6	46.1	11.1	605	78.4
Self	62.9	46.0	27.2	103	77.3
Other (Friend, sibling)	63.5	57.7	15.2	361	78.4
Perpetrator					
Friend /Partner	6.5	25.9	5.3		
Parent	37.3	28.1	0.1	NA	
Other [A B]	56.2	46.0	95.6		

[A] Teacher/Boss/Prefect for physical and emotional, [B] Stranger/relative for sexual

Forms of emotional violence that were reported include; being wished not have been ever born or wished they were dead and being ridiculed. To assess sexual violence, adolescents were asked whether they had ever been forced to do sexual acts such as unwanted kissing, touching private parts, or being physically forced to have sexual intercourse. Sexual violence was reported by

9.6% of the adolescents. Fewer male adolescents (14%) aged 18-19 years in the Eastern and Western region compared to 25% females in the same age group and same regions reported having experienced sexual violence.

Figure 15 shows that over two thirds of the adolescent reported a history of at least one form of violence across all age groups and sex. Notably sexual violence was significantly higher in both sexes among the older age groups (6.3% versus 22.4%, p<0.001 and 1.4% versus 8.6, p<0.001).

Figure 15: Forms of violence by sex and age group

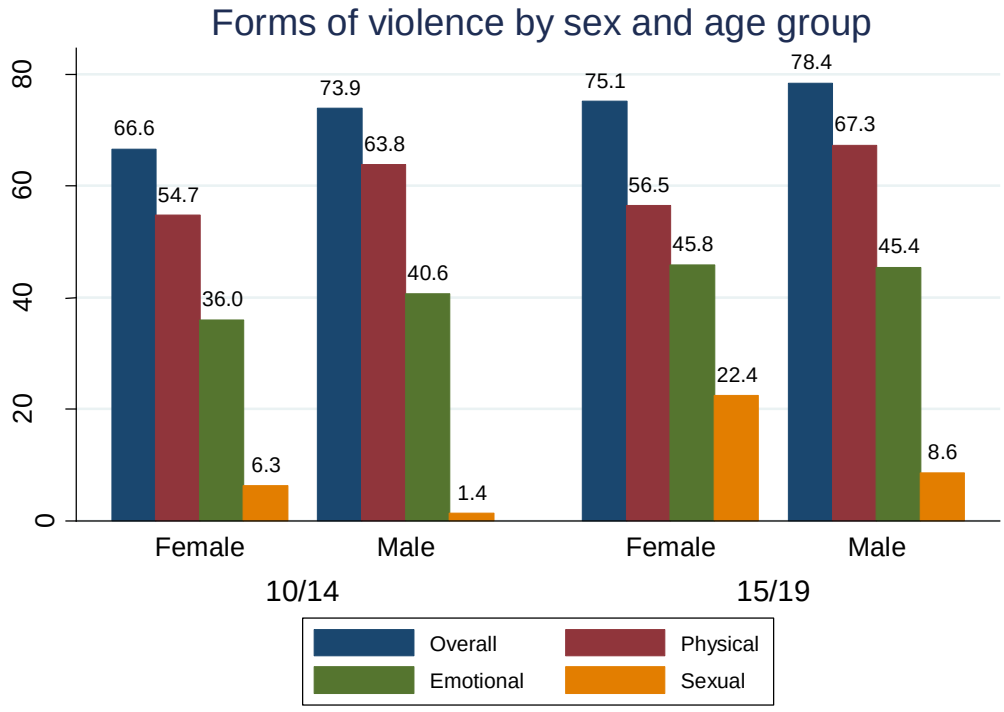


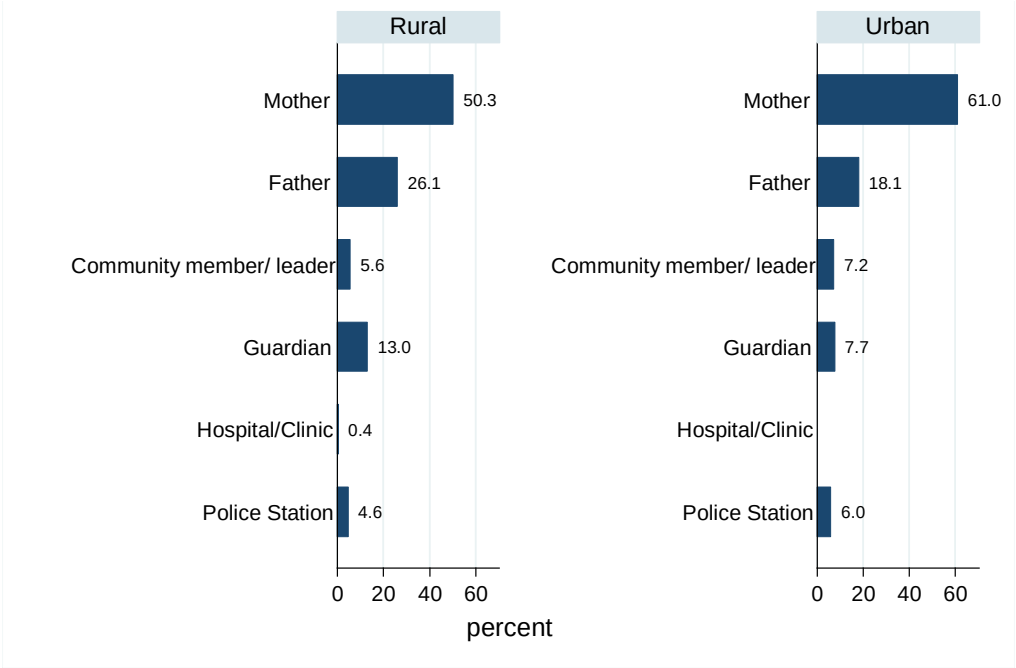
Table 14 shows that males and adolescents age 15-19 years of age were significantly more likely to have experienced at least one of the three forms of violence studied. Adolescents who had not used alcohol were 17% less likely to have experienced violence as were adolescents who had not abused drugs reporting a 15% reduced risk.

Table 14: Adjusted Prevalence Ratios of factors associated with all forms of violence (n= 4694)

	Adj. PR	95%CI		p-value
Sex				
Female	1.0			
Male	**1.08**	**1.04**	**1.12**	**<0.001**
Age (years)				
10-14	1.0			
15-19	**1.07**	**1.03**	**1.11**	**<0.001**
Alcohol use				
Yes				
No	**0.83**	**0.80**	**0.85**	**<0.001**
Drug use (i.e Marijuana)				
Yes	1.0			
No	**0.85**	**0.81**	**0.90**	**<0.001**
Type of location				
Rural	1.0			
Urban	1.05	1.01	1.10	0.043
Region				
Central	1.0			
Eastern	0.82	0.78	0.87	0.334
Kampala	0.89	0.84	0.95	
Northern	0.76	0.72	0.81	
Western	0.99	0.95	1.04	
_cons	1.02	0.95	1.10	0.516

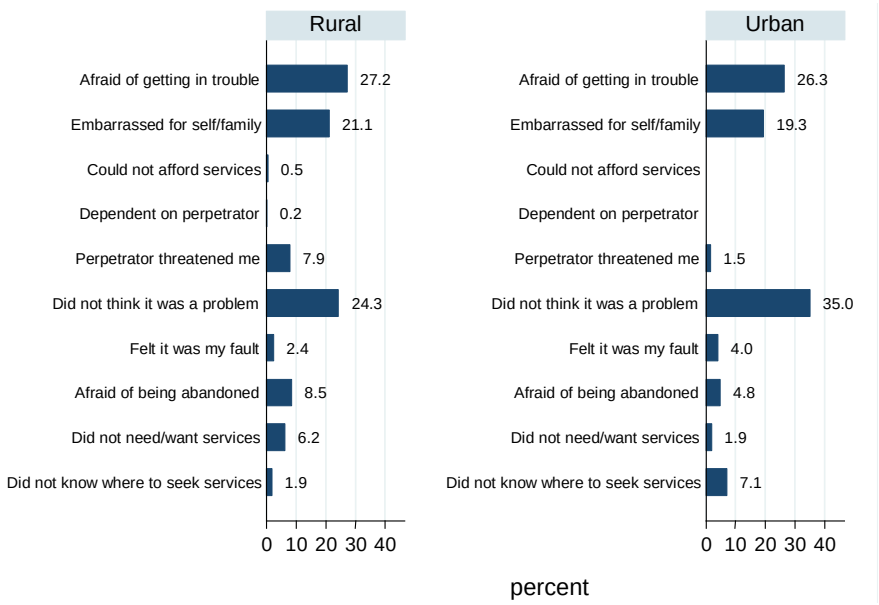
Over half (57.9%) of adolescents never sought help after experiencing sexual violence. When asked where they sought for help, over half of the sexually assaulted adolescents reported seeking help from their mothers in both rural and urban setting as shown in figure 16.

Figure 16: Sources of help for adolescents who experienced sexual violence by residence



The main reasons for not seeking help (across rural and urban setting) after being sexually assaulted were; over one in 4 adolescents reported (rural 27.2% and 26.3%) being afraid of getting into trouble , and not thinking it was a problem (rural 24.3% and urban 35%), Figure 17.

Figure 17: Reasons for not seeking help among adolescents with history of sexual violence



Summary

Our findings show that all the adolescents studied reported experiencing their first episode of violence at around the age of 7 years. In addition, half of adolescents across all regions reported having experienced violence by the age of 10 years. From our findings, physical aggression or violence was more prevalent, with two thirds of male adolescents from the urban residence (69.3%) reporting history of the same. In this study, having ever experienced sexual violence among 15-19 year old female adolescents was high (22.4%) compared to that of the 2016 UDHS in the same age group (9.9%). The difference in these findings can be explained by a slight variation in the perpetrators of the violence and the operational definitions used. The variation in the prevalence of sexual violence by residence in this study (rural 9.6% and urban 10%) and the 2016 UDHS (rural 23% and urban 18.9%) could be due to the difference in study populations.

Rights and decision making

Thirty eight percent of the adolescents reported lack of knowledge about their health rights, with 38.4% being females and 36.9% males, reporting the same, table 15. Lack of knowledge about adolescents' health rights was highest in the Eastern region (47.7%), followed by the North (42.1%), then Central (37.2%) and least in the Western (28.7%) and Kampala (27.0%) regions. Similarly, lack of knowledge was highest among the 10-14 year old (47.2%), followed by 15-17 year old (29.4%) and least among the 18-19 year old (22.2%) adolescents.

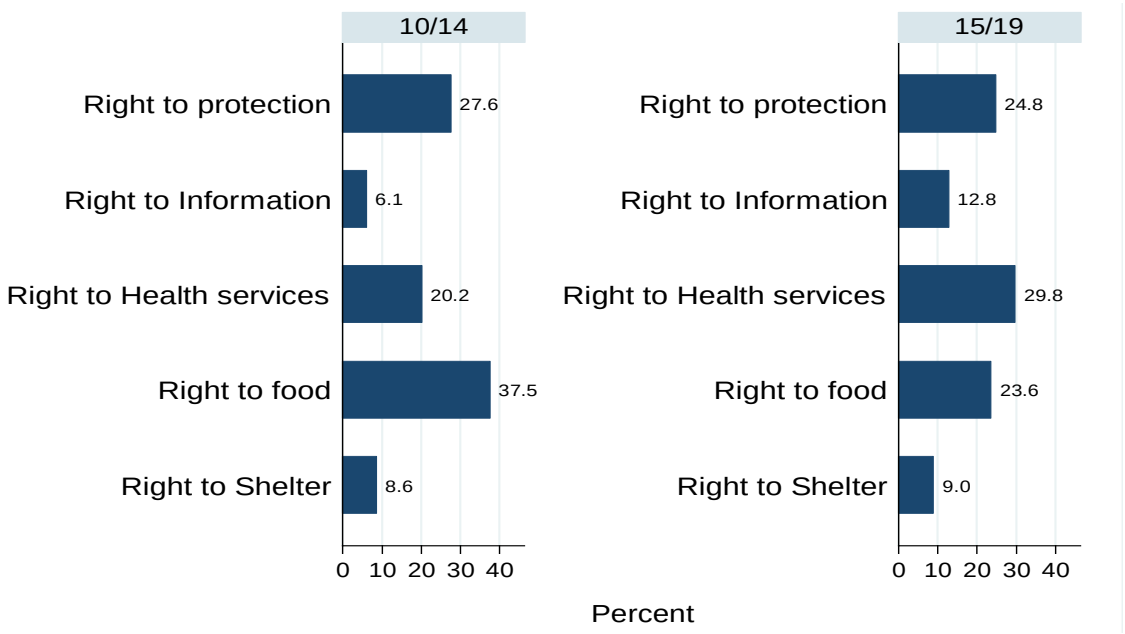
Table 15: Adolescents' knowledge of their health rights

		Knowledge of health rights		
		No	**Yes**	**Unweight count**
Overall	N	1755	2904	4659
	%	37.7	62.3	100
Sex[a]				
Female		38.4	61.6	2508
Male		36.9	63.1	2137
Region				
Central		37.2	62.8	825
*Kampala		27.0	73.0	202
Eastern		47.7	52.3	1808
Northern		42.1	57.9	832
Western		28.7	71.3	983
Age				
10-14		47.2	52.8	2492
15-17		29.4	70.6	1324
18-19		22.2	77.8	839
Type of residence				
Rural		38.4	61.6	3564
Urban		35.4	64.6	1095

Missing: [a]14

When asked about rights that adolescents knew, 37.5% among 10-14 year old compared to 23.6% among 15-19 year old adolescents reported to know their right to food, Figure 18. In addition, 27.6% of the 10-14 year old adolescents compared to 25% of the 15-19 year olds knew their right to protection against violence.

Figure 18: Rights adolescents reported to know by age category



With regard to source of knowledge and information about health rights, over half (54.7%) of the females mentioned school compared to 52.8% of the males, p=0.415 Among females, the second most preferred source was health facility (19.6%), while for males, radio was the source of knowledge and information about health rights (17%), Figure 19.

Figure 19: Reported preferred source of knowledge and information about health rights by gender

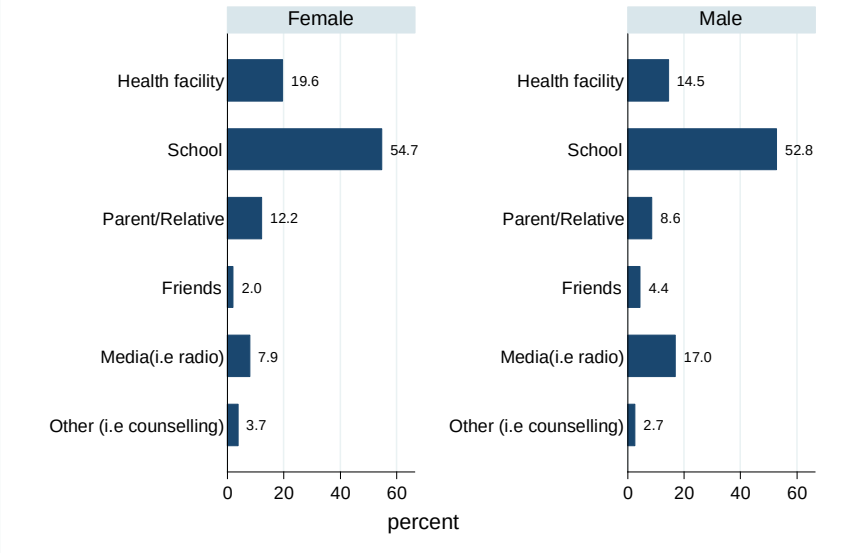


Table 16 shows the preferred source of knowledge and information about health rights by age and sex. Slightly over half (53.9%) of adolescents said that they prefer school as a source of knowledge on health rights. Schools remain the preferred source of health knowledge on rights after a disaggregation by sex for those aged 10-17 years; however adolescents aged 18-19 years preferred to get this knowledge from health facilities. Over two thirds (68.3%) of the adolescents across all age groups and both sex reported accessibility as the main reason for the preferred source of knowledge on health rights.

Overall non -involvement in making decisions about adolescents own life was 51.6%. This was more among females (53.5%) compared to males (49.3%). Adolescents residing in the rural areas were not involved in decision making (53.6%) compared to adolescents in urban setting (45.4%).

Nearly five in every ten (47.2 %) adolescents in the younger age category reported that they would like to make their own decisions concerning education compared to nearly four in every ten (37.5%) in the older category. More older adolescents (34.3%) compared to younger

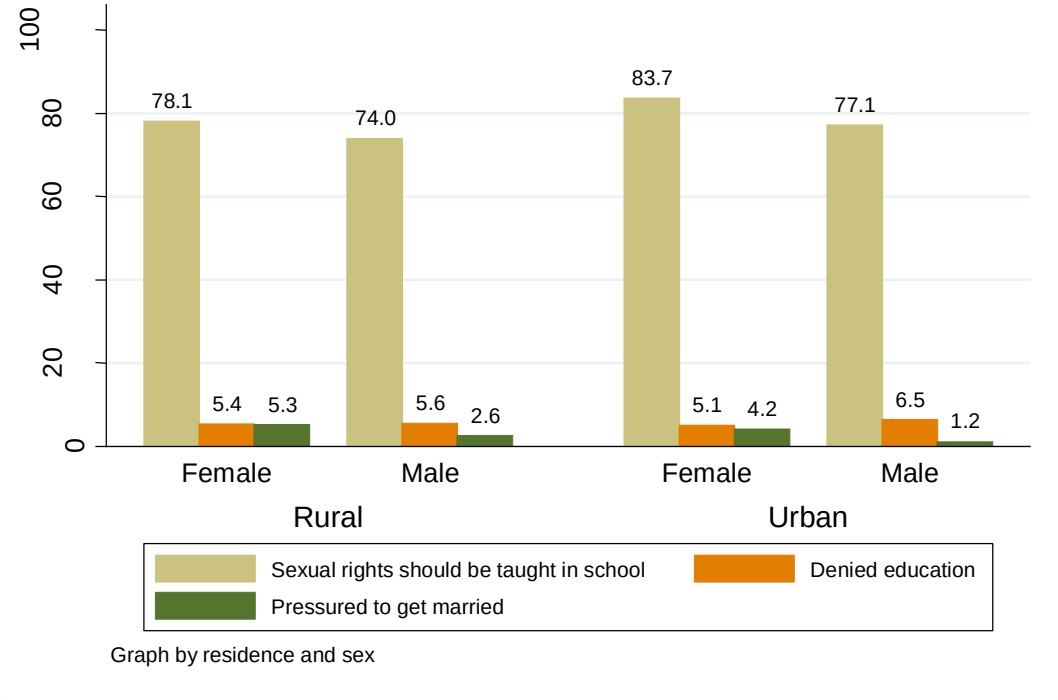
adolescents (23.5%) wanted to make decision regarding their career When adolescents were asked on what would enable them make the right decisions, more younger adolescents (56.2%) reported parental guidance compared to older adolescents (35.9%) as the main reason.

Table 16: Reported preferred source of knowledge and information about health rights by age and sex

	Age and Gender (%)						Total	
	10-14		15-17		18-19		N	%
	Female	Male	Female	Male	Female	Male		
Preferred source of health rights knowledge								
Health facility	12.8	10.7	16.0	12.7	41.1	25.3	343	17.2
School	65.0	56.0	55.3	57.8	28.9	38.7	1077	53.9
Parent/Relative	12.3	11.1	14.7	8.8	8.2	3.1	211	10.6
Friends/Peers	1.2	2.9	1.3	2.7	4.9	10.2	62	3.1
Media	5.8	17.8	9.4	15.6	10.6	17.2	240	12.0
Other (counseling, youth centers, VHTs)	2.9	1.5	3.3	2.4	6.3	5.5	64	3.2
Reasons for the preferred source of health rights								
Privacy	5.1	3.1	10.2	7.4	19.3	17.3	172	8.6
Accessibility	68.6	74.5	67.4	76.0	50.3	63.2	1361	68.3
Language	6.1	5.4	4.3	5.5	9.2	6.3	117	5.9
Other (Knowledgeable informants)	20.2	17.0	18.1	11.1	21.2	13.2	343	17.2
Type of decision the adolescent would like to make for themselves								
Career	22.6	24.8	27.5	34.4	39.1	41.8	930	28.4
Education	50.3	42.9	44.7	41.6	23.7	33.8	1404	42.8
Health	3.1	3.0	1.7	1.9	7.8	2.2	101	3.1
Relationships (Marriage, friends, sex)	3.1	1.9	10.0	6.3	16.8	13.0	208	6.3
HIV testing	0.4	0.4	1.0	0.3	0.3	0.5	16	0.5
Food	6.5	4.9	4.3	2.3	4.3	1.8	151	4.6
Others (Abstinence, business)	14.0	22.1	10.8	13.1	8.1	6.7	468	14.3
What would enable adolescents make right decisions								
Autonomy	9.5	9.6	18.7	24.3	37.5	40.6	583	18.0
Knowledge	14.0	19.0	24.3	22.7	19.7	19.8	615	18.9
Parental guidance	58.7	53.2	43.2	41.2	27.8	22.2	1524	46.9
Other (Believing in myself, being free)	17.8	18.2	13.7	11.8	15.0	17.4	525	16.2

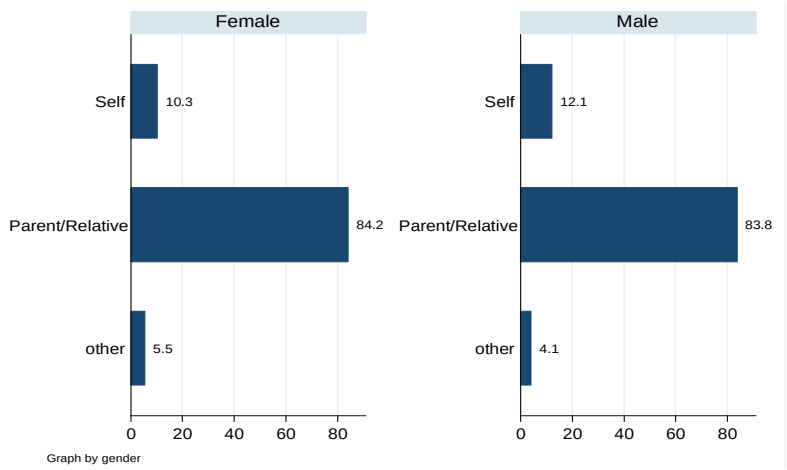
Majority of the adolescents who reported to have ever been pressured to get married were females in rural areas (5.3%) compared to 4.2% among urban females. Surprisingly, being denied the right to education was highest among males in the urban region at 6.5% and least among females (5.1%) in the same setting, compared to rural, Figure 20.

Figure 20: Adolescents' rights by residence and gender



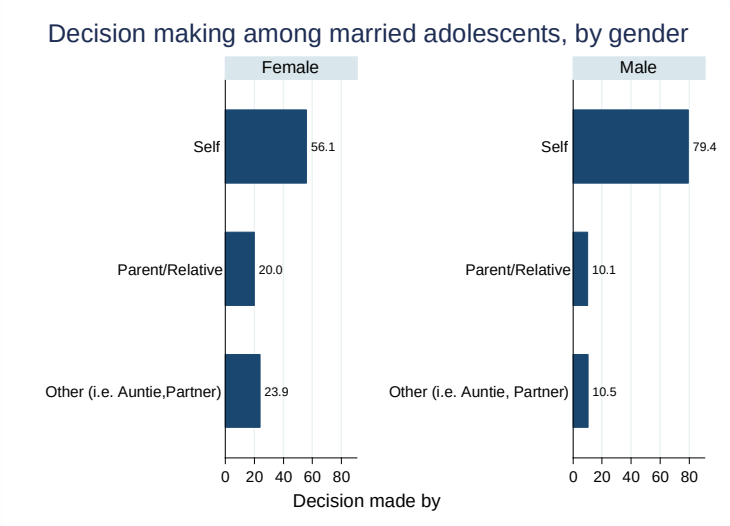
Decision making on behalf of the adolescents was reportedly to be mainly done by the parents/relatives with 84.2% of the females and 83.8% of the males. More (37.2%) adolescents aged 18-19 years mentioned that they make their decisions compared to 12.5% and 2.3% in the 15-17 and 10-14 year age groups, Figure 21.

Figure 21: Decision making and choices by gender



Analysis of decision making among married adolescents, revealed that decision making was mainly done by themselves with 56.1% of the females and 79.4% of the males making their own decisions. Figure 22 shows that 43.9% and 20.6% of the married females and males respectively had their decisions made by other people such as aunties, brothers, partners among others.

Figure 22: Decision making among married adolescents



Adolescents reported ever been pressured to make a choice or do something against their will. This was more commonly reported by females, with 38.1% reporting being pressured to make a decision and least among males in the urban setting (28%), as shown in Figure 23. Further still, it is important to note that 68.5% reported to be pressured by parents and least by peers (8.1%).

Figure 23: Adolescents rights by residence and gender

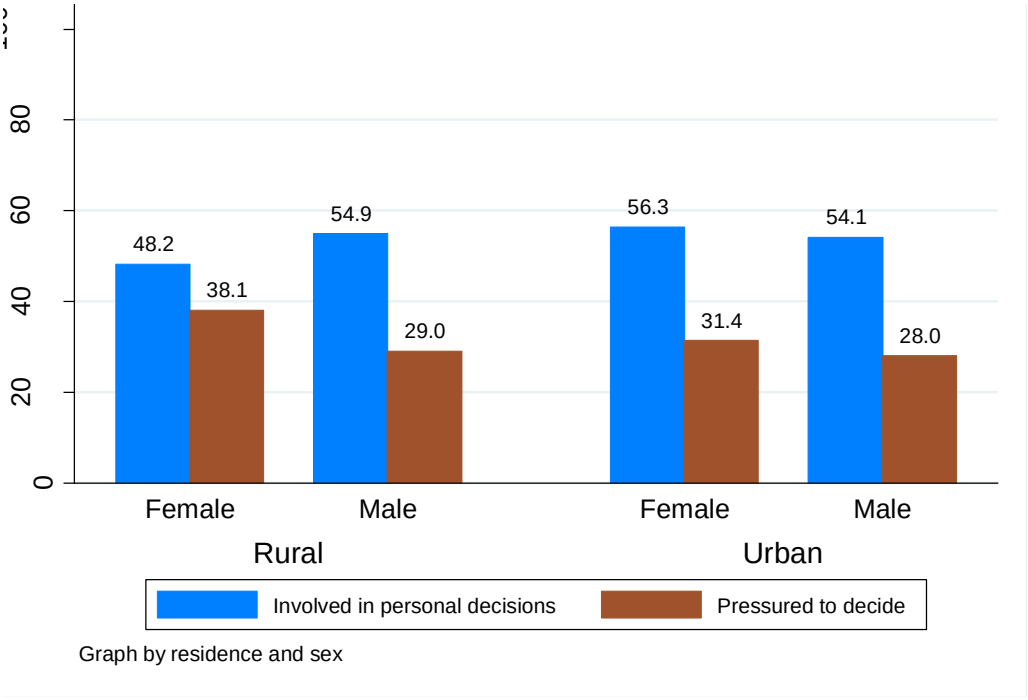
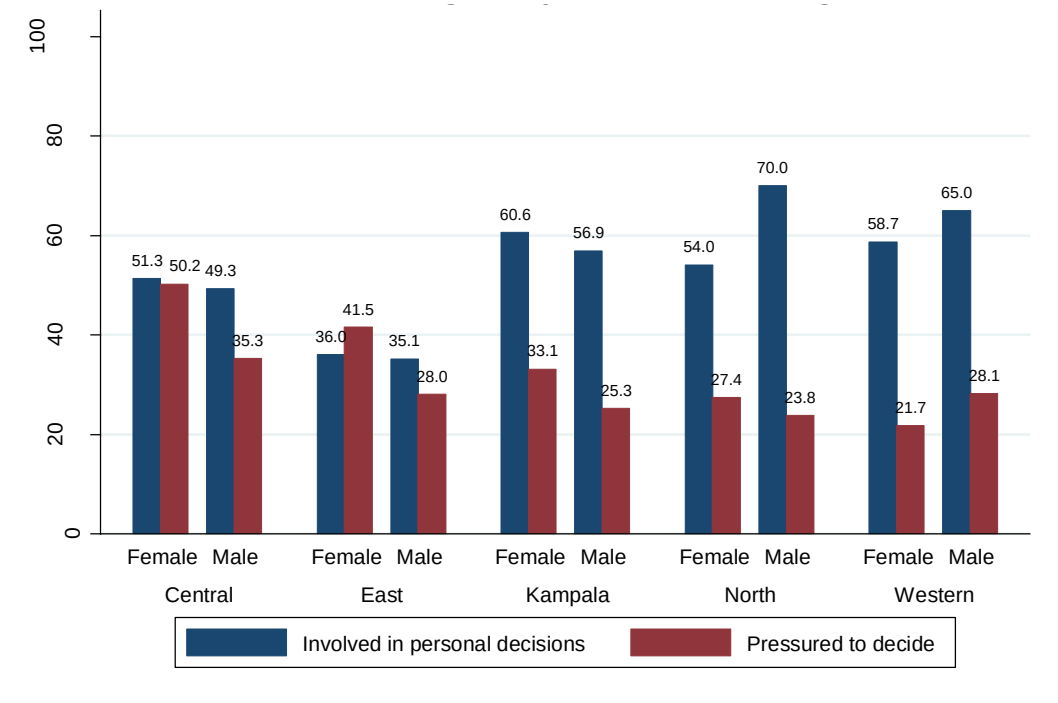


Figure 24 shows adolescent rights by region and gender. Half (50.2%) of the female adolescents in the Central region reported to have ever been pressured to make decisions and more males (70%) in the Northern region reported to be involved in making their personal decisions. Fewer adolescents in the Eastern region reported being involved in their personal decisions.

Figure 24: Adolescents rights by region and gender



Summary

Older adolescents than younger ones more commonly reported knowledge about health rights. This similar to an earlier study (Ruck et al), where younger children were more likely to report not knowing their rights compared to the bigger ones [34]. Decision making on behalf of the adolescents was reportedly to be mainly done by the parents/relatives with 84.2% of the females and 83.8% of the males. There is need to assess adolescents' understanding and knowledge about either type of right and age appropriate training and support for adolescents and their families on decision making to promote health and wellbeing.

5.2.4. NUTRITION AND SEDENTARY LIFESTYLE

PHYSICAL INACTIVITY

Physical inactivity was assessed with questions on physical exercise in a week to reduce recall bias but also provide a sense of general physical activity history. An example of such a question was "In a week, on how many days do you do physical exercise?" The adolescents were also asked to state the number of hours spent watching TV in a day.

Table 17: Physical exercise by region, sex and age

	Physical exercise in a week			
	No exercise	**1-3 days**	**4-6 days**	**7 days**
N	1450	1252	879	1125
%	30.8	26.6	18.7	23.9
Region				
Central	33.4	22.9	19.1	25.1
East	20.8	23.1	31.7	25.7
Kampala	9.6	5.6	3.5	3.4
North	15.7	21.1	15.6	10.9
Western	20.5	27.3	30.1	34.8
Sex				
Female	68.5	54.4	44.9	42.4
Male	31.5	45.6	55.1	57.6
Age category				
10-14	47.2	51.7	53.2	63.3
15-17	28.6	29.5	33.1	23.1
18-19	24.1	18.8	13.7	13.7
	Watching television			
	Don't watch	**less than 2 hours**	**2-4 hours**	**5 or more hours**
N	2936	770	721	271
%	62.5	16.4	15.3	5.8
Region				
Central	20.0	28.2	37.5	51.3
East	28.3	26.8	12.8	8.8
Kampala	1.8	6.1	13.8	28.9
North	19.5	12.7	10.0	5.2
Western	30.4	26.2	25.8	5.8
Sex				
Female	56.6	47.3	47.4	64.9
Male	43.4	52.7	52.6	35.1

Overall, 76.1 % of the adolescents reported that physical exercises were irregular (less than 7 days a week).

Table 17, shows that overall, one third (30.8%) of the adolescents reported that they did not do any physical exercise in the week prior to the survey. The Central region had the highest percentage of adolescents who were not doing physical exercises at 33.4% and Kampala had the least (9.6%). One in five adolescents (21%) watched TV for ≥2 hours in a day whereas 12.9% were involved in playing video games.

Figure 25: Time spent by adolescents watching television by age group

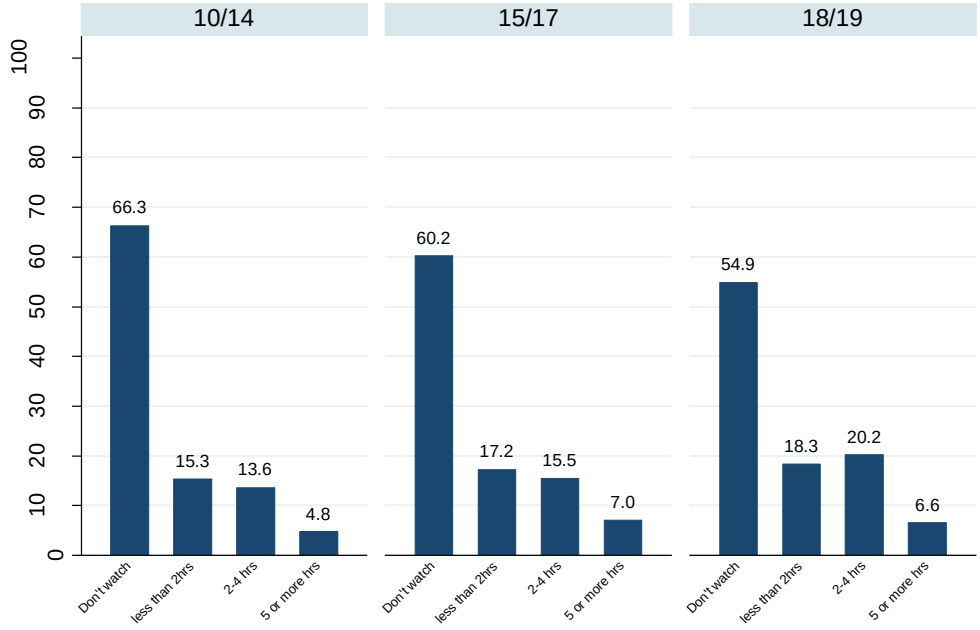
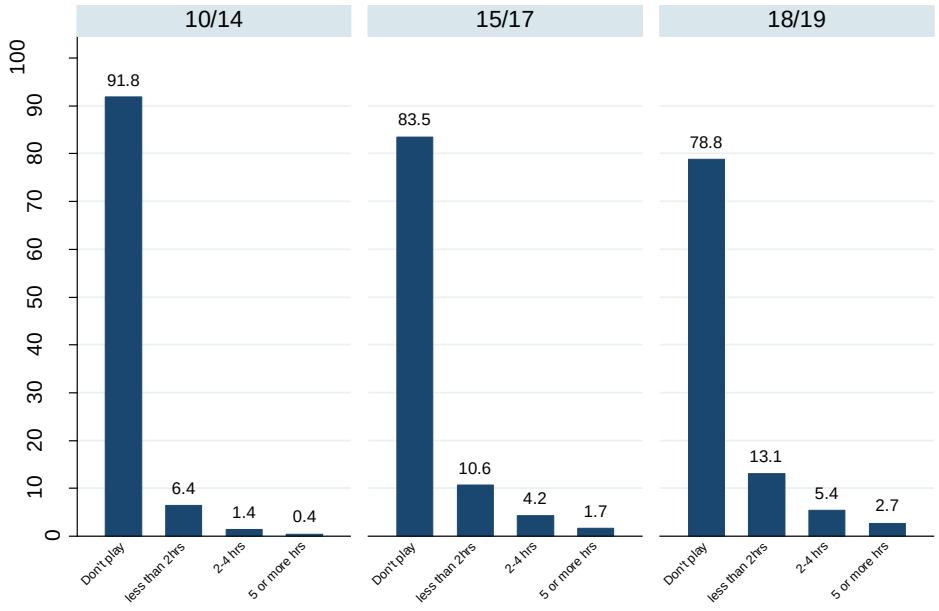


Figure 26: Time spent playing video games by age groups



Time spent playing video games was highest among 18-19 year old (2.7%), followed by 15-17 year old (1.7%) and lowest among 10-14 years (0.4%).

Poor eating habits

Poor eating habits were assessed using dietary intake of breakfast and vegetables. Nearly a half of the adolescents (48.1%) reported that did not have breakfast daily in the past seven days preceding the survey. Missing breakfast in a week prior to the survey was most common in the Northern region (61.3%), followed by Western (58.2%) and Eastern (51.6%) regions. More adolescents residing in rural (52%) compared to urban (35.4%) areas missed breakfast at least once in a week. Vegetable consumption was more common in the rural ($p<0.001$) compared to urban settings. Seventy five percent of adolescents (75%) in rural settings reported eating vegetables for 2 or more days in a 7 days span compared to 50% or less in urban settings

DIETARY INTAKE

Reported milk consumption did not differ between settings with 75% reporting 4 or less days of milk consumption in both rural and urban, Figure 27 and Table 18 below.

Figure 27: Adolescent dietary intake in past seven days

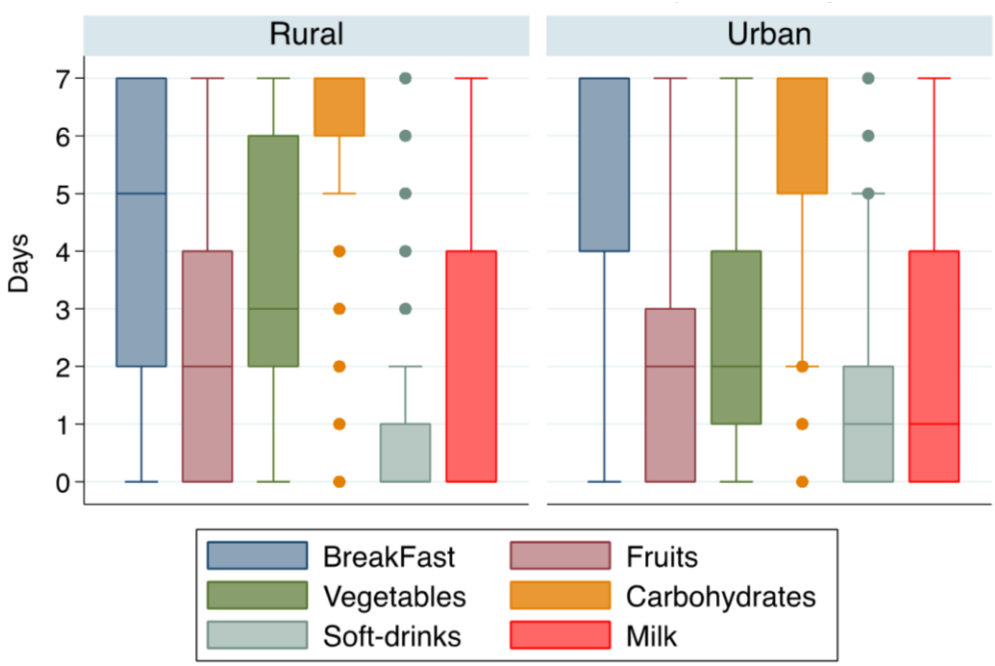


Table 18 shows median (IQR) days consumed some foods in the past week. Overall three-quarters of the adolescents reported having breakfast or carbohydrates in the last for the whole week (7 days), similar in the urban and rural. Milk and soft drinks are the least common foods were significantly more consumed in the urban ($p<0.01$) than rural settings.

Table 18: Median (IQR) days taken the following per week in the last 14 days

	Breakfast	Fruits	Vegetables	Carbohydrates	Soft drinks	Milk
Total	7(2, 7)	2(0, 4)	3(1,5)	7(6,7)	0(0,1)	0(0, 4)
Residence						
Rural	5 (2, 7)	2 (0, 4)	3 (2, 6)	7 (6, 7)	0 (0, 1)	0 (0, 4)
Urban	7(4, 7)	2 (0, 3)	2 (1, 4)	7 (5, 7)	1 (0, 2)	1 (0, 4)

Summary

Overall, four in five of the adolescents reported that they did physical exercises for less than seven days in the past one week. Lack of physical activity has been reported as being one of the risk factors largely responsible for the increased prevalence of overweight, obesity, mental health and related health risks [35, 36]. It is therefore important that communities including schools are assisted in setting up facilities that can be used by adolescents to do physical activities.

Twenty one percent of adolescents reported watching TV for $\geq$ 2 hours. This is a high percentage yet watching TV for long hours has been associated with negative effects such as violent behaviors, early sex debut, weight gain and poor academic performance [37-39]. Parents and guardians should limit the time for watching TV and regulate what the adolescents watch.

More adolescents in the urban setting were having breakfast on most of the days in a week compared to their counterparts in the rural setting. Regular breakfast has been found to be associated with a healthy lifestyle and health status[40]. Regular breakfast has also been positively associated with academic performance [41]. It is therefore important that programs are designed to provide regular breakfast.

Adolescents in the rural settings reported eating more vegetables compared their counterparts in the urban areas. This may be because of the fact that vegetables are more readily available in rural settings. Special programs should be arranged to educate adolescents on the importance of eating vegetables across the country.

5.3. INDIVIDUAL MENSTRUAL PRACTICES

5.3.1. Menstruation awareness and experience

Table 19a shows awareness of and experience with menstruation. Overall, 80% females have ever heard of menstruation, and 56.4% had already experienced the first menstrual periods, i.e, reached menarche. Among the 10-14 year-old adolescents, 63% were aware of menstrual period, while awareness was almost universal for older females, 98.3% (15-17 years) and 99.9% for the 18-19 year-olds. Twenty one percent 21% of the young adolescents (10-14) had already experienced their first menstrual periods compared to 92% in the 15-17 year-olds and 98.9% for the older (18-19) adolescents.

Table 19a: Awareness about, and experience with menstruation

	Awareness about menstrual		
	Number of females	% Ever heard	% had first menses
Total	2,503	80.2	56.4
Age category			
10-14	1,282	63.3	21.9
15-17	734	98.3	92.3
18-19	487	99.9	98.9

5.3.2. Materials products used during menstruation and sources

Table 19b shows materials commonly used during menstrual periods by age. Overall and across all ages, the most commonly used materials were disposable sanitary pads (52.1%) with 52.8% among (15-17), and 53.8% among (18-19) and 47.7% among young adolescents (10-14). Reusable material (pieces of cloth, cloth pads and knickers) were reported by 46.1% and were more common among the young (10-14 years) adolescents, 49.5%. Some, 1.6% use nothing. Table 18c shows percent distribution of menstrual materials by residence. In the rural areas, disposable (48.7%) and reusable (49%) were equally used, but disposable were more common in the urban 59.5%. Also females with nothing to use were more common in the rural (1.9%) than urban (0.8%) settings.

Table 19b: Materials commonly used during menstrual periods by age

	Age group							
	All		10-14		15-17		18-19	
	N	%	N	%	N	%	N	%
Total	1436	100.0	293	100.0	672	100.0	471	100.0
Materials								
Cloth/knickers/Cloth pads	662	46.1	145	49.5	306	45.6	210	44.7
Disposable Sanitary pads	748	52.1	140	47.7	355	52.8	254	53.8
Herbs/grass	4	0.3	3	1.1	0	0.1	0	0.1
Nothing	22	1.6	5	1.7	11	1.6	7	1.4

Table 19c: Percent distribution of menstrual materials by residence

	Rural				Urban			
	All	10-14	15-17	18-19	All	10-14	15-17	18-19
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Materials								
Cloth/knickers/Cloth pads	49.0	54.2	47.7	47.5	39.5	37.7	40.4	39.2
Disposable Sanitary pads	48.7	42.1	50.2	51.0	59.6	61.8	58.9	59.3
Herbs/grass	0.4	1.3	0.1	0.1	0.1	0.5	0.0	0.0
Nothing	1.9	2.4	2.0	1.4	0.8	0.0	0.6	1.4

5.3.3. Social effects of menstruation

MENSTRUATION RELATED SCHOOL ABSENTEEISM

Table 20a, Figures 28 and 29 show menstrual related school absenteeism. A total of 918 adolescent had already experienced first menstrual period and were enrolled in school at the time of the survey. Overall, 26% of the adolescents reported menstrual related school absenteeism, which tended to be higher in the urban (29%) compared to rural (24.7%) settings, p=0.1200. Older adolescents (18-19 years) reported a significantly higher absenteeism, 34% compared to the 10-14 year-olds (24.7% p=0.0264) and 15-17 year-olds (24.0%, p=0.0091). However, when rural-urban comparisons were done, age differences in absenteeism only persisted in the rural but not in the urban.

MENSTRUATION RELATED REASONS FOR ABSENTEEISM

Table 20b and Figure 30 show menstrual related reasons for school absenteeism. Overall, 64% felt sick or uncomfortable and 29.9% did not have sanitary pads. Also, fear of class making fun (5.3%) was a reported reason for absenteeism. The reason for "felt sick" was more common among older adolescents, 81% compared to 60.2% for the 15-17 year-olds and 56.9% for the young (10-14) adolescent. These reasons did not significantly vary by area of residence.

In order to determine independent factors associated with menstrual related school absenteeism, we used a generalized linear model accounting for survey approach. Table 20c shows independent risk factors associated with menstrual related school absenteeism. Factors significantly associated with lower chance of absenteeism were being in better economic background as defined by use of modern house construction materials such as tiles/iron and cement when compared to use of non-modern methods, adj. PR=0.62 (0.39, 0.99), p=0.047 and being resident in Kampala compared to central region, adj. PR=0.56 (0.32, 0.98), p=0.043. However, being an older (18-19) adolescent compared young (10-14) adolescents, adj. PR=1.38 (0.93, 2.05) and resident in urban compared to rural setting, adj. PR=1.47 (0.98, 2.19) tended to have higher risk of absenteeism, but these did not attain statistical significance.

Table 20a: Menstrual related school absenteeism if already experienced first menstrual period

		Percent absent		
	Number	**Overall**	**Rural**	**Urban**
Total	918	26.0	24.7	29.2
Age				
10-14	260	24.7	23.6	27.3
15-17	509	24.1	21.8	30.1
18-19	149	34.7	37.6	29.4

Table 20b: menstrual related reasons for school absenteeism

Age category	**10-14**		**15-17**		**18-19**		**Total**	
	n	%	n	%	n	%	n	%
Total	60	100.0	123	100.0	52	100.0	235	100.0
Reasons								
No pads	19	32.5	41	33.4	10	18.6	70	29.9
Class made fun	5	7.9	8	6.2	0	0.0	12	5.3
Felt sick	34	56.9	74	60.2	42	81.4	150	64.0
Other	2	2.7	0	0.2	0	0.0	2	0.8

Table 20c: Adjusted Prevalence Ratio of factors associated with menstrual related school absenteeism

Characteristics	Prevalence ratio (adj. PR)	95%CI		p-value
Age (years)				
10-14	1.0			
15/17	0.94	0.65	1.36	0.738
18/19	1.38	0.93	2.05	0.111
Residence				
Rural	1.0			
Urban	1.47	0.98	2.19	0.062
House construction materials				
Roof and wall				
Non-modern	1.0			
Mixed	0.68	0.42	1.10	0.112
Modern	**0.62**	**0.39**	**0.99**	**0.047**
Geography region				
Central	1.0			
East	1.25	0.81	1.93	0.314
Kampala	**0.56**	**0.32**	**0.98**	**0.043**
North	0.77	0.45	1.34	0.351
Western	1.16	0.64	2.11	0.613
_cons	0.32	0.17	0.58	0.000

Figure 28: Menstrual related school absenteeism by age

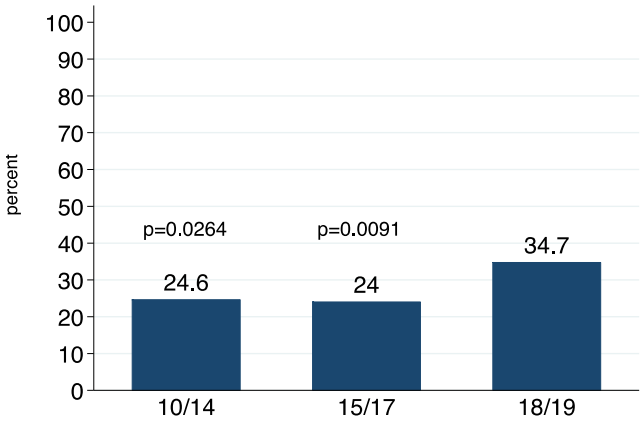


Figure 29: Menstruation related school absenteeism by residence and age

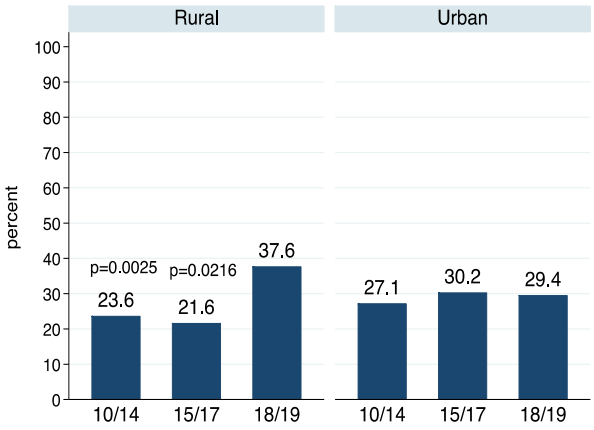
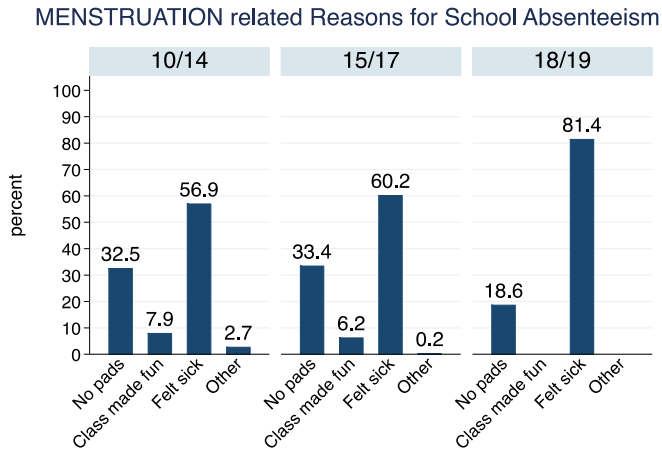


Figure 30: Menstrual related reasons for school absenteeism



Summary

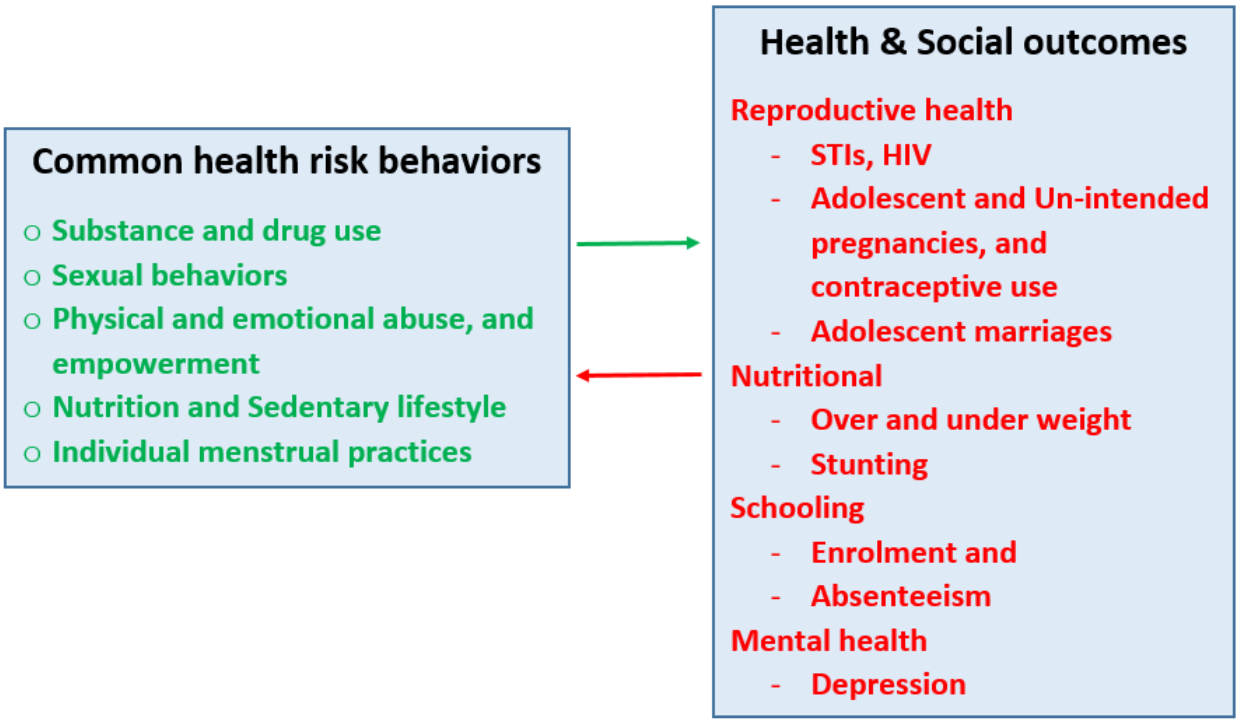
The study findings showed that almost all adolescent girls had some kind of materials used during the menstrual periods. Just over a half used the more hygienic disposable materials (sanitary pads) followed by reusable materials mainly made from pieces of cloth or knickers. Not surprising, more hygienic materials were significantly more common in the urban settings, and among older (18-19 year) adolescents. About two percent of adolescents reported use of no materials or use of herbs resident in rural settings.

Use of makeshift materials often provide inadequate protection that may lead to adverse health outcomes such as infections, and staining and humiliation that can the girl's stay in class difficult for the duration of the menstrual period. Lack of recommended materials has been cited in a previous study conducted in Rukungiri, Western Uganda [42, 43]. Interventions may need to focus on ensuring that the most commonly used re-usable materials, that appear affordable in the rural areas can be made hygienic so as to avert the potential health risk of poor sanitation.

This survey indicated that a quarter of the adolescents that had already experienced their first menstrual period and were in school-missed school due to menstrual related reason. This was rather a high rate of absenteeism, which may happen at least 2 times a term during the normal school calendar. It is not clear how much class work such girls miss while away, but this may affect their class performance with a potential to drop out of school if poor performance persist. The key reason for absenteeism was the physiological changes that the adolescents experienced, which may be classified as being sick. Interventions including counseling and preparing the adolescent to know what to expect during such periods may be important in addressing missing school associated with physiological "felt sick" reasons. It is also interesting to note that "felt sick" reasons were more commonly reported in urban areas compared to the rural ones. However, it should be noted that lack of appropriate sanitary materials remained an important justification for absenteeism. Interventions, for both rural and urban, that address lack of such important materials for the adolescents' health and well-being should be promoted. Some schools have already suggested including sanitary materials as part of the government tuition contribution especially in public schools. The rate of absenteeism and similar reasons have been reported elsewhere [42, 43] [44].

5.4. HEALTH AND SOCIAL OUTCOMES OF HEALTH RISK BEHAVIOURS AMONG ADOLESCENTS

The health and social outcomes of the health risk behaviors among adolescents are summarized in the figure below.



5.4.1 Health Outcomes

Sexual and reproductive health

SEXUALLY TRANSMITTED INFECTIONS (STIS)

Adolescents were asked whether they had heard of other sexually transmitted infections/ diseases (STDs/ STIs) apart from HIV, their signs and symptoms, and if they had ever suffered from an STI. Just over a half (51.7%) of the adolescents had ever heard of STIs, and awareness was higher among older adolescents, Table 26a. History of ever suffering from an STI was 9.6%and was higher in the urban (12.6%) than rural (8.6%) settings, p=0.0024. As expected, having ever suffered from STI was higher among older adolescents. Prevalence of reported STI was similar between urban and rural adolescents at all age groups except among the older ones (18-19 years) where prevalence in the rural (13.4%) was significantly lower than that in urban settings (23.9%), p=0.0004.

Self-reported STIs were more common in females (13.1%) than males (5.6%), p<0.0001. By school status, STIs were more common among adolescents who stopped schooling, 17.5%, currently enrolled (7.2%) and lowest in the never in school, 3.2%, Table 26b. Across all categories school, sex and residence, older (18-19) adolescents had the highest prevalence of self-reported STIs. By region, Central (27%), Kampala (22%) and Eastern (19.1%) had the highest prevalence of STI s among the older adolescents (18-19) years. Across all ages, Western had the lowest prevalence of STI s.

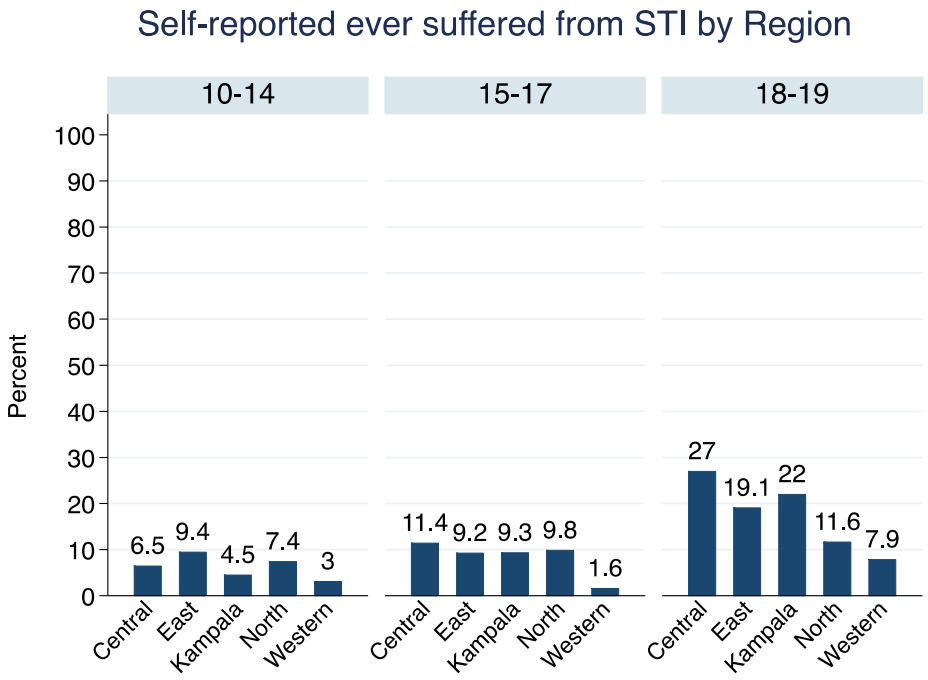
Table 21a: Knowledge of and ever suffered from STI by age and residence

			Ever suffered					
	Ever heard		All		Rural		Urban	
	n	%	n	%	n	%	n	%
Total	4645	51.7	2328	9.6	1558	8.6	770	12.6
Age								
10-14	2490	31.1	738	6.1	524	6.5	200	4.5
15-17	1321	71.1	915	7.3	613	7.1	302	7.9
18-19	834	82.5	675	16.6	421	13.4	268	23.9
Used a condom	330	41.8	395	8.5	251	35.6	147	43.9

Table 21b: Adolescents who ever suffered from STIs by school and sex

	Sex				School status					
	Female		Male		Never		Currently enrolled		Stopped	
	N	%	n	%	n	%	N	%	n	%
Total	1282	13.1	1046	5.6	17	3.2	1761	7.2	550	17.5
Age										
10-14	392	7.9	345	4.1	2	0.0	697	6.3	38	2.7
15-17	512	10.3	404	3.6	5	0.0	747	7.2	163	8.1
18-19	378	22.1	297	9.9	9	5.7	317	9.2	349	23.5

Figure 31: Self-reported having ever suffered from STI

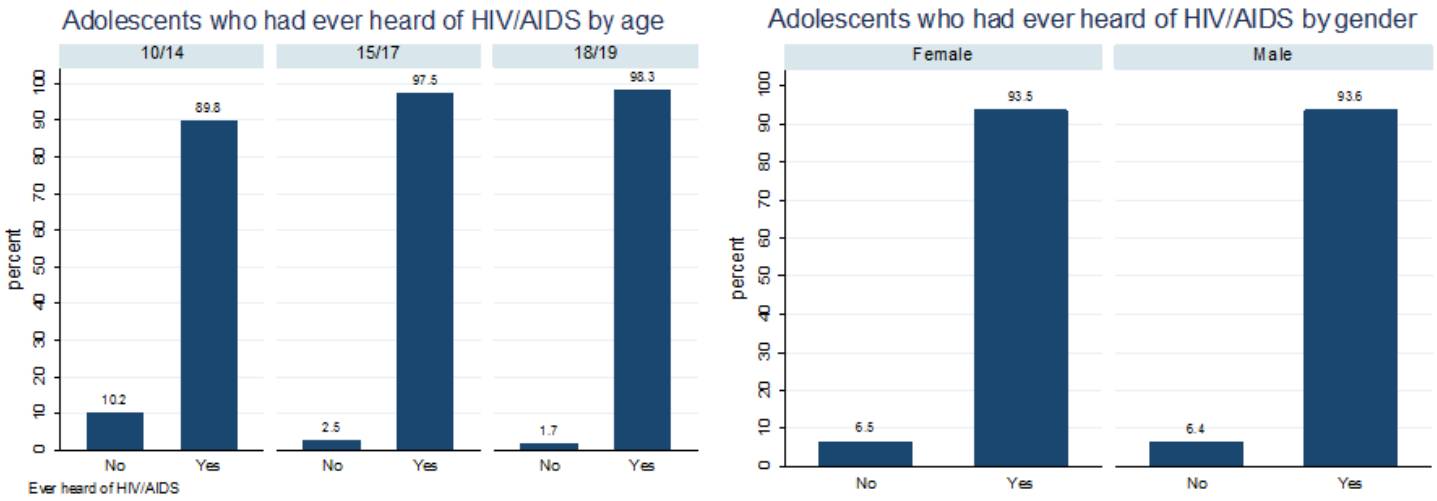


HIV/AIDS

Nearly all adolescents from Kampala, Central and Western regions (97.8%, 96.4% and 94.5%) respectively had ever heard of HIV/AIDS.

Figure 32 shows knowledge of HIV/AIDS by age category. Ever having heard of HIV/AIDS was higher among adolescents aged 15-17 (97.5%) and 18-19 years (98.3%), compared to those aged 10-14 years (89.8%).

Figure 32: Knowledge of HIV/AIDS by gender and age category



Ninety six percent (93.6%) of adolescents had ever heard of HIV testing, and this did not differ by gender; females (93.5%) and males (93.6%).

Overall, forty three percent reported that they had ever tested for HIV. Of these more female (45.1%) than male (39.7%) adolescents had ever tested for HIV. Half of those who self-reported ever testing for HIV were from Kampala, closely followed by the eastern region (51.2%), and only 50.4% were from the Western region. In the 10-14 year age category, slightly more male adolescents (24.3%) compared to females (21.5%) reported to have ever tested for HIV. More

females (54.7%) versus males (48.2%) had ever tested for HIV in the 15-17 age category. Nearly five out of six (85%) females compared to 63.9% males had tested for HIV in the 18/19 year old category. In the 10/14 year age category ever testing was highest among those who had never been in school (23.2%), followed by those in school (22.9%) and lowest in those who had stopped school (19.9%). Being ever tested for HIV was highest among those who stopped schooling in both the 15/17 and 18/19 year age categories (62.7% and 79.7%) respectively (Figure 33).

Figure 33: HIV testing by region, schooling, sex and age

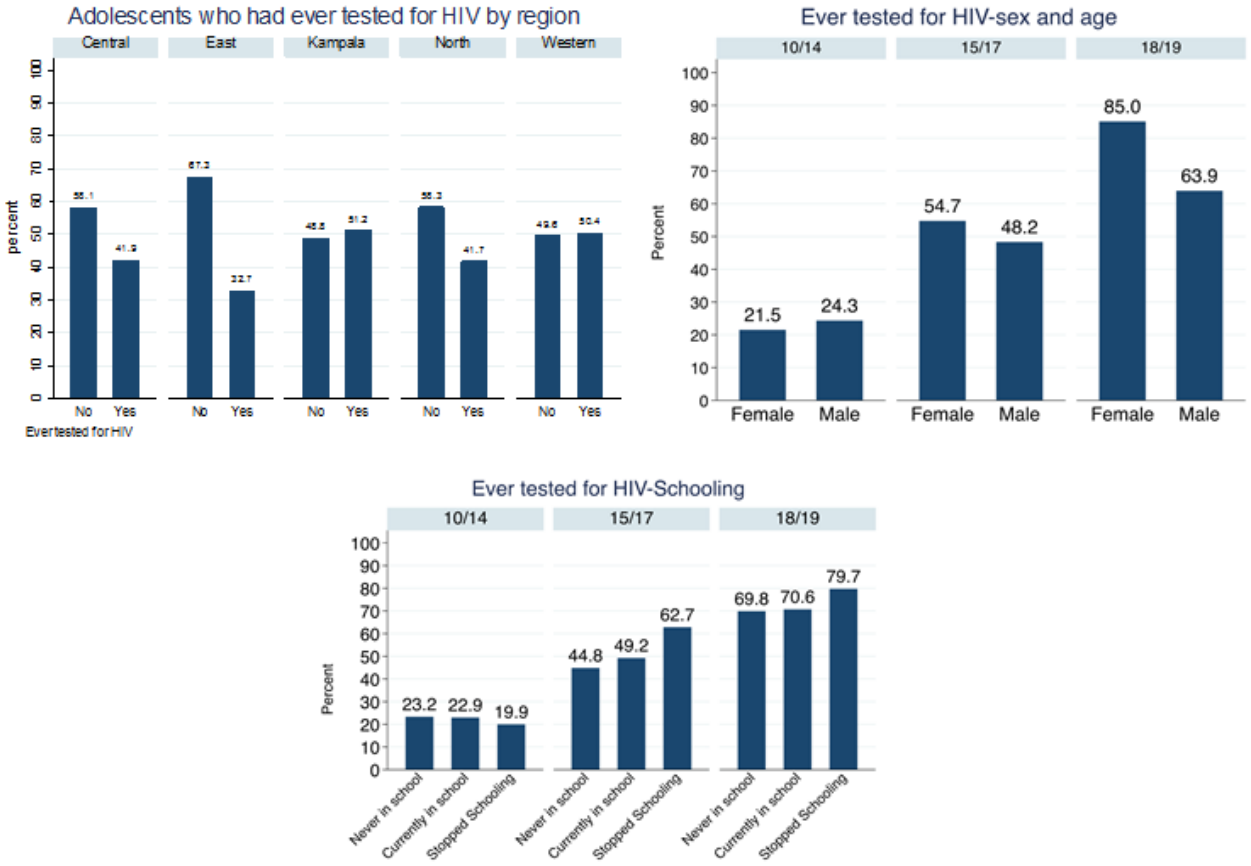


Table 22 shows awareness of HIV, HIV testing received and willingness to share results by sex and age category. Awareness of HIV was very high, 93.6% and nearly universal among the older

(18-19) adolescents, 98.3%. Awareness of HIV testing was also high, 91.3%, again higher in the older adolescents compared to the young (10-14) ones, 86.2%. However, among those aware of HIV tests, only 42.5% have ever tested for HIV; three quarters (75.6%) in older (18-19) adolescents, half (51.8%) among 15-17 year-olds and only 22.8% in the young (10-14) adolescents. Among those who tested 97% were willing to share their results. Of the adolescents who self-reported that they had ever tested for HIV and were willing to share their results, 1.9% (32/1680) reported that they were HIV positive. More males (2.0%) relative to females (1.8%) reported to be HIV positive. Self-reported HIV positivity was highest in the young (3.5%) followed by 1.7% in the older (18-19 years) and lowest (0.9%) among the 15-17 year-old adolescents.

Eighty three percent 83.5% of self-reported HIV positives reported being in care, with the highest level in the young (10-14), 82.3% followed by 15-17 year-olds at 70% and just over a half (55%) in the older adolescents.

A higher proportion of males (92.8%, n=13) compared to females (75.8%, n=17) reported that they were in care.

Table 22 Awareness of HIV, HIV testing received and willingness to share results by sex and age.

			HIV (%)				
	Ever heard of HIV/AIDS		Heard HIV test	Ever HIV tested	Willing to share results	HIV+ Prevalence	HIV+ in care
	N	%					
Total	4671	93.6	93.6	42.6	96.8	1.9	83.5
Sex							
Female	2522	93.5	93.5	45.1	96.8	1.8	75.8
Male	2149	93.6	93.6	39.7	96.8	2.0	92.8
Age category							
10-14	2486	90.0	86.2	22.8	94.6	3.5	82.3
15-17	1328	97.4	95.6	51.8	96.9	0.9	70.2
18-19	835	98.3	98.3	75.6	98.7	1.7	55.0

Adolescent Marriages

Among all adolescents (10-19 years), 3.8% have ever been married, 3.6% among the rural and 4.4% in urban settings. However the practice was more common among older (18-19 years) adolescents, 18.6% and 1.6% of the 15-17 year-olds but none among the young (10-14 years) adolescents. Also, ever married was more common among female (6.2%) compared to male (0.9%) adolescents, and among adolescents who stopped schooling (20.8%) or never been to school (16.7%). Regional variations showed the practice as more common in the East (21.3%) and West (23.8%) relative to central (16%), Kampala (8%) and North (12). Overall, the median (IQR) age at first marriage was 17 (16, 18) years; lower in females 17 (16, 18) than males 18 (17, 18).

Only 3.2% of all adolescents (10-19 years) were currently married at the time of survey; higher among females (5.2%) compared to males (0.8%), but similar between rural (3.1%) and urban (3.3%). Also older (18-19 years) adolescents were married (15.6%) but only 1.4% of the 15-17 year-olds and none among the young (10-14 years) adolescents. Adolescents pressured into getting married were not uncommon (3.8%), mainly in females (5.0%) than males (2.3%).

Table 23: Adolescent marriage by residence, schooling status and sex

	Ever married							Currently married					
	All							All					
	N	%	Rural	Urban	Never in school	Currently in School	Stopped Schooling	N	%	Rural	Urban	Female	Male
Total	4590	3.8	3.6	4.4	16.7	0.0	20.8	4590	3.2	3.1	3.3	5.2	0.8
Age													
10-14	2474	0.0	0.0	0.0	0.0	0.0	0.1	2474	0.0	0.0	0.0	0.0	0.0
15-17	1298	1.6	1.1	3.3	6.8	0.1	7.7	1299	1.4	1.0	2.3	2.3	0.3
18-19	818	18.6	19.6	16.0	46.0	0.0	32.3	818	15.6	16.9	12.2	25.2	4.0

Adolescent Pregnancy

EVER AND CURRENT PREGNANCY

Among all adolescents, 10-19 years, nearly 1 in 10 (8.5%) had ever being pregnant. Ever pregnant was more common among adolescents not currently in school (30.8% if never went to school and 38.7% if stopped schooling), than adolescents currently in school (0.5%). However, no statistically significant differences were observed by type of residence rural (8.1%) and urban (9.7%).

In this study, only 2.2% of adolescents aged 10-19 years were pregnant at the time of the survey; higher in the rural (2.6%) compared to urban (1.3%), p=0.0353. Also the prevalence of pregnancy was higher with older aged, 0.3% (10-14), 4.8% (15-17) ad 38.4% (18-19). Adolescents who stopped schooling had the highest pregnancy rates, 10% followed by those who had never been in school (2.9%) and only 0.2% for the ones currently in school.

Table 24a1: Percent adolescents who had ever been pregnant by residence, school status and age

	All		Rural		Urban		Never in school		Currently in school		Stopped Schooling	
	N	%	N	%	N	%	N	%	N	%	N	%
Total	2510	8.5	1678	8.1	832	9.7	49	30.8	1955	0.5	506	38.7
Age												
10-14	1335	0.3	941	0.4	375	0.0	18	0.0	1256	0.3	55	0.1
15-17	714	4.8	463	4.4	257	5.7	14	18.5	550	0.8	150	18.4
18-19	461	38.4	275	41.0	200	33.2	17	72.1	149	0.9	301	55.9

Table 24a2: Percent adolescents currently pregnant by residence, school status and age

	All		Rural		Urban		Never in school		Currently in school		Stopped Schooling	
	N	%	N	%	N	%	N	%	N	%	N	%
Total	2511	2.2	1679	2.6	832	1.3	49	2.9	1952	0.2	510	10.1
Age												
10-14	1330	0.0	937	0.0	375	0.0	18	0.0	1253	0.0	54	0.0
15-17	713	2.1	462	2.3	257	1.6	14	0.0	550	0.6	150	7.9
18-19	467	8.8	280	11.6	200	3.5	17	8.3	149	0.5	306	13.0

UNINTENDED PREGNANCY

As shown in table 25 below, the overall, 41.5% of adolescents who had ever been pregnant reported that the pregnancy was unintended and this proportion did not differ between rural and urban adolescents. Unintended pregnancy was higher in the 15-17 year-olds (57.8%) compared to older (18-19) adolescents, 38%. All the seven pregnancies reported among the adolescents who were currently in school were unintended, while 190 adolescents who had stopped school and 13 of those who had never been in school had unintended pregnancies.

Table 25: Unintended last pregnancy among adolescents by residence, school status and age

	All		Rural		Urban		Never in school		Currently in school		Stopped Schooling	
	N	%	N	%	N	%	N	%	N	%	N	%
Total	210	41.5	142	41.5	68	41.5	13	34.5	7	100.0	190	40.1
Age												
10-14	-	-	-	-	-	-						
15-17	34	57.8	22	57.7	12	57.8	2	0.0	5	100.0	27	54.7
18-19	176	38.3	120	38.5	56	37.9	11	41.7	2	100.0	163	37.6

Child delivery

Of the 2,531 female adolescents aged 10-19 years, 519 (20.6%) had ever had sexual intercourse. Among the sexually active female adolescents 43.1% had ever been pregnant of whom 75.5%) delivered a child.

Contraceptive use

CONTRACEPTIVE METHODS

Table 26 shows methods of contraception used to prevent pregnancy at last sex encounter. Just over half (51.7%) did not use any contraceptive method at last sexual encounter. None use of contraceptive methods was higher in rural (54.5%) compared to urban (44%). Among the methods, condoms were the most commonly used methods (38%), followed by IUD (3.6%), pills (3.3%) and withdrawal (2.6%). Condom use was significantly higher in urban compared to the rural (45.7% vs 36.3%) while IUD was more common in urban (6%) relative to rural 2.7%. However, pills were more common in rural, 3.9% relative to urban at 1.6%. Contraceptive use by schooling status shows that non-contraceptive use was very high (96.5%) in adolescents who had never been in school, followed by those who had stopped schooling (52%) and the ones who were currently at school at 46.4%. Non-contraceptive use was also highest among the youngest (10-14years) at 81%, followed by the 18/19 year age category (50%) and then the 15-17 year age category at 44.8%.

Table 26: Contraceptive methods used at last sex encounter by age, residence and schooling status

Contraceptive methods	Characteristics (%)								Overall	
	Residence		Schooling status			Age group			N	%
	Rural	Urban	Never in school	Currently in School	Stopped Schooling	10-14	15-17	18-19	486	100
No method	54.5	44.0	96.5	46.4	52.1	81.0	44.8	50.0	251	51.7
Pills	3.9	1.6	-	0.3	5.0	0.0	0.0	5.3	16	3.3
Condom	36.3	45.7	3.5	48.1	35.9	15.4	51.2	37.0	189	48.1
IUD/Implant/Ring	2.7	6.0	-	1.5	5.0	0.0	3.8	4.1	18	1.5
Withdrawal	2.5	2.8	-	3.8	2.1	3.6	0.2	3.5	13	3.8

SOURCES OF CONTRACEPTIVES

The most common sources of FP methods were public health facilities (28.8%), followed by private (19.5%) and shops (16.9%), Table 27.

Table 27: Source of contraceptives among sexually active female adolescents

	10-14	15-17	18-19	Total
N	10	73	142	225
Total	100.0	100.0	100.0	100.0
Sources				
Shop	11.9	30.4	10.3	16.9
Pharmacy	0.0	3.7	8.1	6.3
Gov't clinics	22.2	18.1	34.8	28.8
Private	18.6	24.2	17.1	19.5
Friend	0.7	2.1	13.5	9.2
Other	24.6	5.6	8.9	8.5
Don't know	22.0	15.9	7.3	10.7

Summary

Just over a half (51.7%) of the adolescents had ever heard of STIs. Nearly 1 in 10 (9.6%) had ever suffered from an STI. Awareness of STIs was average and yet studies have shown that the burden of STIs among adolescents is high in both developing and developed countries [45-47]. This could have been due to the fact that this study excluded HIV from the STIs that were assessed. In addition, the younger adolescents who were the majority of the in this study might have not yet received information on STIs. The self-reported having ever suffered from an STI could have been under estimated because of fear but also lack of knowledge of the signs and symptoms. None the less the findings are similar to those from other studies though they were among highly selective adolescents [48, 49] .On the contrary, awareness of HIV/AIDS was almost universal in all regions and sexes which is encouraging. Notably only 43% of the adolescents had ever tested for HIV. Eight in ten (83.5%) of the self-reported HIV adolescents were in care but unfortunately, fewer older adolescents (15-19 year olds) and females were in care. Adolescent responsive HIV services should be put in place so as to increase testing for HIV, entry and retention in care. HIV is still a burden among adolescents and HIV testing is the entry point to care.

Overall, the prevalence of current pregnancy was higher in rural (2.6%) compared to urban (1.3%). Adolescents who stopped schooling had the highest pregnancy rates, followed by those who had never been in school and only 0.2% for the ones currently in school. This indicates that adolescents who become pregnant are unlikely to return to school and those who left school, pregnancy is one of the likely reasons. This is similar to other studies that found out that adolescent girls who become pregnant are often unable to complete school, education and economic status influence adolescent pregnancy [50, 51]. Overall, unintended pregnancies were high and all the seven pregnancies reported among the adolescents who were currently in school were unintended. Use of contraception among sexually active adolescents should be encouraged. Circumstances surrounding adolescent pregnancies should be explored using qualitative methods to better inform adolescent pregnancy prevention strategies.

The study found that 49% of the sexually active adolescents used a contraceptive method the last time they has sex. Condom was the most commonly used method of contraception. Contraceptive use by schooling status shows that non-contraceptive use was very high (96.5%) in adolescents who had never been school, followed by those who had stopped schooling (52%) and the ones who were currently at school at 46.4%. The high non- contraceptive use could be due to lack of adolescent reproductive health programs in and out of schools. Non- contraceptive use might be responsible for the high number of unintended pregnancies that were found in this study. This could imply that schooling alone does not empower adolescents to use contraceptives. A study done in rural Uganda among in and out of school also found a higher non contraceptive use among in-school compared to out- of school adolescents though this study was in one district among adolescents aged 15-19 years [52].

MENTAL ILLNESS AMONG ADOLESCENTS

In this study, heads of households were asked if they had any child aged 10 to 19 years with mental illness/ issues in their households. Overall 3.7% (n= 4682) reported that they had children aged 10-19 years with mental illness. Of the adolescents with mental illness, over a half (54.9%,) were in the 10-14 year age category with 91% (71/78) households having only one adolescent with a mental illness. In the 15- 19 year age category, almost all (93.8%, 60/64) households had only one adolescent with a mental illness. Most of the adolescents with a mental illness were in the rural (4.0%) compared to urban (2.9%) settings.

Figure 34 below shows the proportion of adolescents with mental illness by region.

Mental illness was highest among adolescents in the Western region at 4.5% followed closely by central region at 4.4%, Eastern region (3.3%) and Kampala (2.6%).

Figure 34: Percentage of adolescents with reported mental illness by region

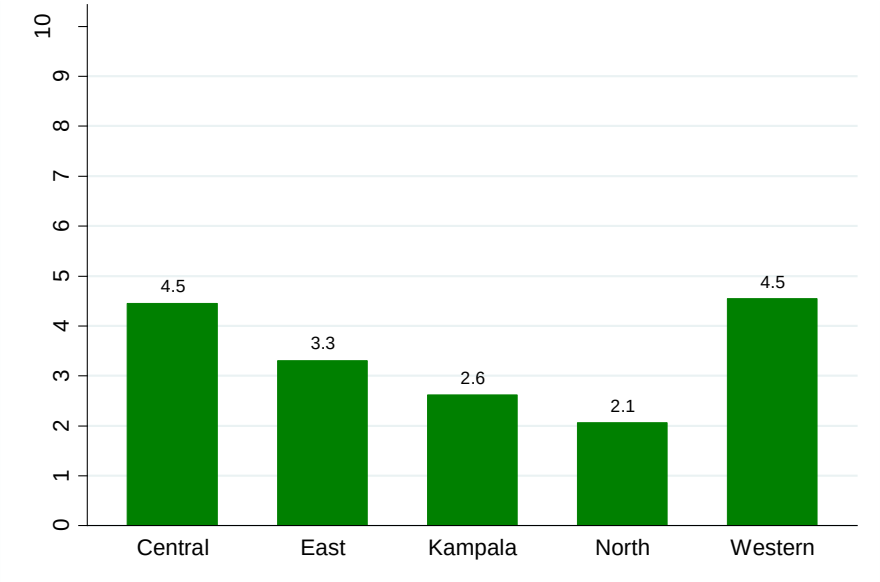
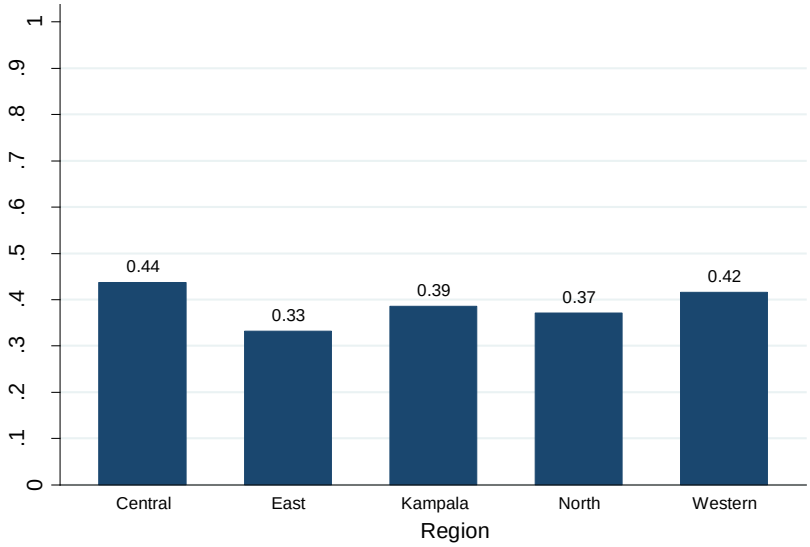


Figure 35, shows the regional variation among adolescents with mental illness who were receiving care. The central region had the highest proportion of adolescents (44%) with mental illness who were receiving treatment, followed by the western region (42%). The eastern region had the lowest (33%) percentage of adolescents receiving care.

Figure 35: Proportion of adolescents who were receiving care for mental illness by region



Self-reported depression

Study participants were assessed for depression using a question "In the PAST YEAR have you felt depressed or sad most days, even if you felt okay sometimes?" Those who responded in affirmative were considered to have self-reported depression.

Table 28 shows prevalence of depression by several characteristics and age group. Three in every ten (34.1%) adolescents reported to have experienced depression in the past 12 months. This was statistically significantly higher ($p<0.001$) in the 15-19 year olds (41.7%) compared to 10-14 year olds (27.6%). There was a higher percent of depressed adolescents who had also experienced sexual violence (46.3%), emotional violence (44.8%) and physical violence (35.5%) and this trend was consistent in the disaggregation by age.

Table 28: Prevalence of self-reported depression and a disaggregation by individual characteristics and age group

	Depression		Overall	
Age category (years)	10-14	15-19	%	Unweighted
%	27.6	41.7	34.1	4658
Sex				
Male	28.5	44.1	32.0	2154
Female	26.4	38.7	35.8	2544
Residence				
Rural	27.2	39.8	32.9	3259
Urban	28.8	47.0	38.2	1453
Region				
Central	33.1	44.9	38.2	1044
East	18.5	37.2	27.0	1079
Kampala	46.7	65.9	56.4	660
North	33.5	45.9	39.4	923
Western	23.1	34.9	28.8	1006
Experienced violence				
Yes	30.2	44.2	37.0	3388
No	21.5	33.7	26.4	1324
Physical violence				
Yes	29.6	42.1	35.5	2775
No	24.6	41.1	32.0	1911
Sexual violence				
Yes	35.2	49.5	46.3	435
No	27.2	40.1	32.8	4269
Emotional violence				
Yes	38.1	51.3	44.8	1864
No	20.9	33.9	26.5	2835

Table 29: Factors associated with experiencing self-reported depression in the past 12 months among adolescents

Characteristics	Prevalence Ratio	95% CI		P-value
Sex				
Female	1			
Male	1.03	1.01	1.04	0.003
Residence				
Rural	1			
Urban	1.01	0.99	1.04	0.211
Region				
Central	1			
East	1.04	1.01	1.06	0.005
Kampala	0.87	0.84	0.90	<0.001
North	0.98	0.96	1.01	0.196
Western	1.06	1.04	1.09	<0.001
Age category				
15-19	1			
10-14	1.09	1.06	1.10	<0.001
Sexual violence				
No	1			
Yes	1.05	1.02	1.09	0.002
Emotional violence				
No	1			
Yes	1.12	1.10	1.14	<0.001

Table 29 shows the factors associated with experiencing depression in the past 12 months among adolescents. Important to note was that the 10-14 year olds reported a 9% higher risk of experiencing depression compared to 15-19 year olds. Males had a 3% increased risk compared to females, 1% increased risk among adolescents in the urban areas compared to those in the rural. Six percent increased risk among adolescents in the Western region compared to those in the Central region. Adolescents that had experienced sexual and/or emotional violence had a 5% and 12% risk of having experienced depression in the past 12 months. These additional characteristics: physical violence, orphan status, use of alcohol and drugs were not associated to having experienced depression in the past 12 months.

Summary

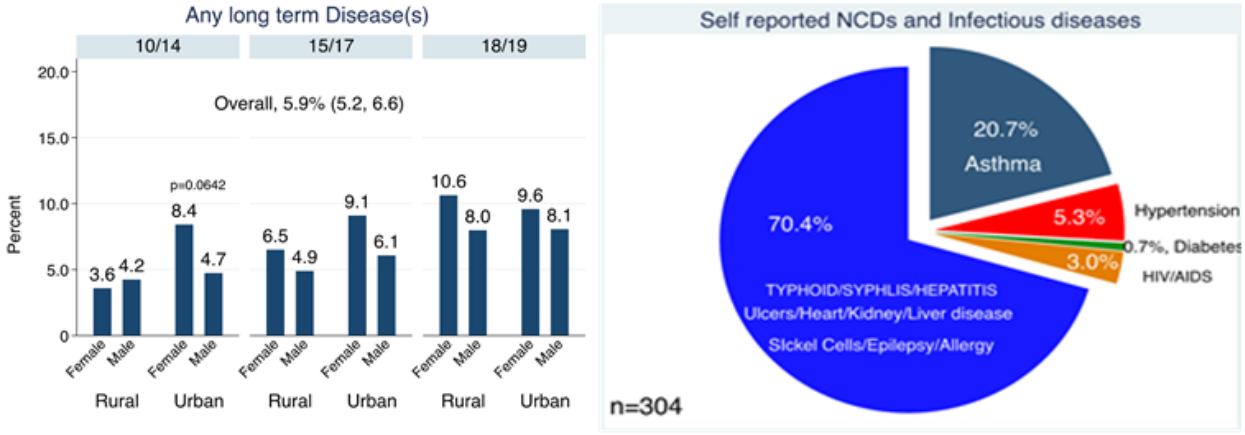
Depression among adolescents is not different medically from adult depression. However, symptoms in adolescents may manifest themselves in different ways than in adults due to the different social and developmental challenges facing adolescents. These include: peer pressure, changing hormone levels and developing bodies. Depression is associated with high levels of stress, anxiety, and in the worst possible scenarios, suicide. It can also affect adolescents; personal, school, work, social, and family life.

The overall prevalence of depression was high (34.1%) in the past 12 months. This could have been over estimated due to recall bias and use of a single question to assess depression. The prevalence of depression was higher among adolescents who had experienced violence. This was specifically for emotional and sexual violence. Studies from sub- Saharan Africa have found depression among adolescents to range between 15-37% among students in Egypt, Sri Lanka and Nigeria [53-55]. These studies were among in-school adolescents in age categories that did not cover the entire age category of adolescents of 10-19 years.

NON COMMUNICABLE AND INFECTIOUS DISEASES

Overall, 5.9% of the adolescents reported ever having been told by a health worker that they had a chronic disease. More female adolescents than males both in the rural and urban areas reported to have a chronic disease in all age categories except for those residing in the rural areas in the 10/14 age category (Figure 36). The self-reported non communicable and infectious diseases are also shown in figure 36. They included asthma (20.7%), hypertension (5.3%), HIV/AIDS (3.0%) among others.

Figure 36: Prevalence of chronic, infectious and self-reported NCDs among adolescents



Summary

The common self- reported non communicable diseases (NCDs) were Asthma, hypertension and HIV/AIDS. Prevention, early diagnosis, proper management and prevention of NCDs among adolescents are critical in averting the burden of NCDs during adulthood life. NCDs have been projected to be the leading cause of death by 2030. This calls for innovative interventions to avert this crisis. Interventions that tackle the social and economic precursors of NCD risks, encourage positive health behaviors, and discourage negative ones in young people can significantly shift the projected trajectory of NCDs in Africa. Positive behaviors established during childhood or adolescence, such as healthy eating and regular exercise, are more likely to be carried through to adulthood. When unhealthy behaviors persist into adulthood, they become difficult to change[56]. Adolescents should be availed with programs that promote prevention of NCDs.

Nutritional status

Using the 1995 WHO growth reference: use of percentiles and Z –scores; Table 18a and Figure 36) shows that overall under-weight among adolescents was 6.5% (95% CI: 5.5, 7.6), overweight 6.8% (95%CI: 5.9, 8.0) and normal weight was 88% (95% CI: 85.3, 88.0). Under-weight was significantly higher among males, 9.6% irrespective of being rural or urban, while overweight

was significantly higher among urban females, 14.4% compared to rural-female adolescents, 9%. By age groups underweight was 9.4% among male adolescents aged 10-14 years and 10.7% in the 15-17 year old male adolescents. Over-weight was more common in female adolescents aged 15-17 years (13.4%) and 18-19 year old adolescents (13.8%), Table 18b.

Table 16c shows nutritional status by region. Northern had the highest percentage of adolescents who were under-weight, 12.8% followed by Eastern at 8.1%. Kampala and Central regions had the highest percentage of adolescents who were overweight at 14.3% and10.3% respectively.

Stunting

Nutrition status was also assessed by use of stunting as an indicator, height-for-age categorized as stunting if HAZ scores were less than -2 SD.

Overall, 15.5% of the adolescents were stunted. In the regression model, factors associated with stunting were being male, PR=1.55 (95% CI: 1.25, 1.92) and resident in Western compared to the Central region, PR=1.40 (95% CI: 1.04, 1.90). However, stunting was significantly lower among adolescents in households with better social-economic status based on housing materials PR=0.63 (95% CI: 0.49, 0.81) compared to poorer structures, and resident in the Northern compared to Central region, PR=0.51(95% CI: 0.33, 0.78).

Table 30a: Nutritional status (bmi-for-age zscores) by sex and residence

	Rural				Urban				Total	
	Female		Male		Female		Male			
	n	%	n	%	n	%	n	%	n	%
Total	1819	100.0	1704	100.0	648.7	100.0	438.4	100.0	4611	100.0
Nutrition status										
Under-weight	69	3.8	163	9.6	24	3.6	42	9.6	298	6.5
Normal,	1587	87.2	1499	88.0	532	81.9	379	86.5	3997	86.7
Overweight	163	9.0	42	2.5	94	14.4	17	3.9	316	6.8

Table 30b: Nutritional status (bmi-for-age zscores) sex and age

	Female			Male			
Age(years)	10/14	15/17	18/19	10/14	15/17	18/19	Total
Nutrition status							
Under-weight	6.0	1.5	0.5	9.4	10.7	8.4	6.5
Normal,	86.3	85.1	85.7	87.2	87.2	90.0	86.7
Overweight	7.7	13.4	13.8	3.5	2.12	1.6	6.8

Table 30c: Nutritional status (bmi-for-age zscores) region

	Region					
	Central	Eastern	Kampala	Northern	Western	Total
Nutrition status						
Under-weight	4.5	8.1	4.3	12.8	3.5	6. 5
Normal,	85.2	87.7	81.4	84.4	89.8	86.7
Overweight	10.3	4.2	14.3	2.9	6.7	6.8

Figure 37: Nutritional status (bmi-for-age zscores) by sex and residence

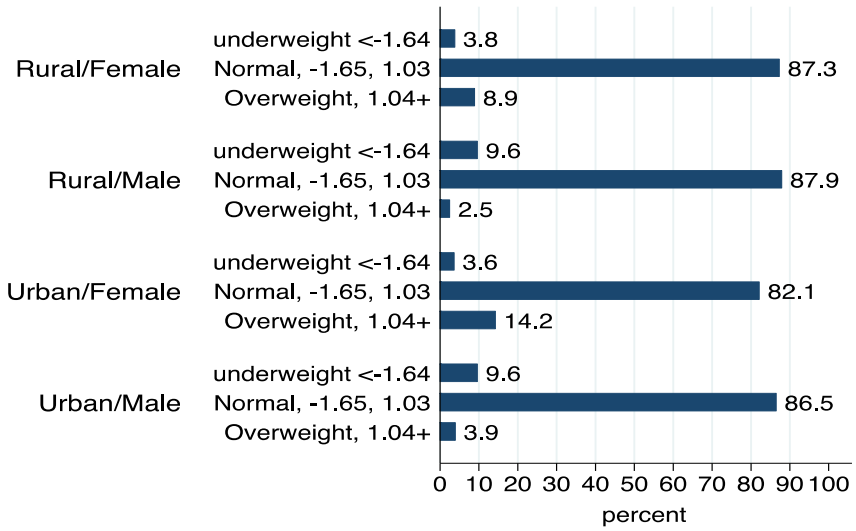
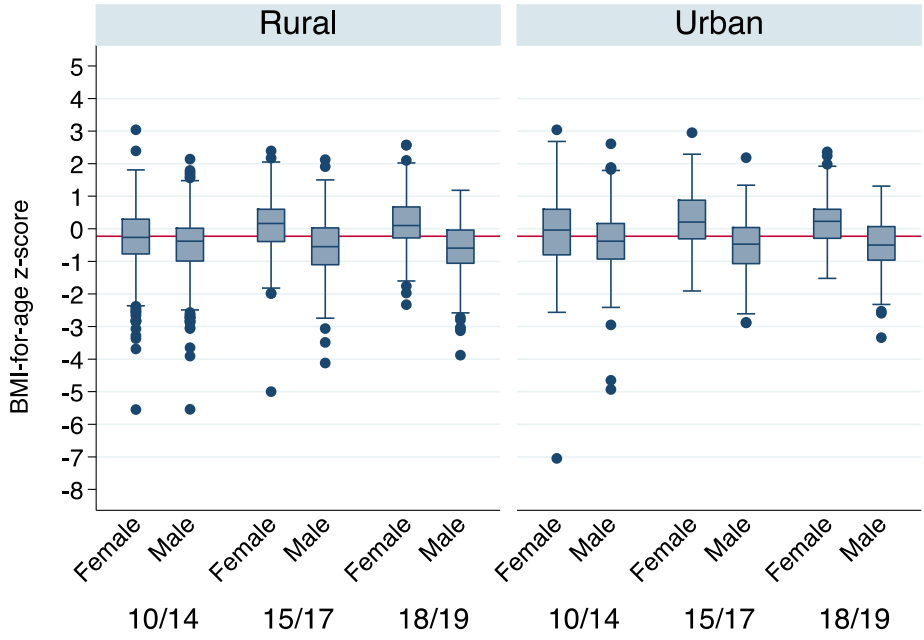


Figure 38: Nutritional status (bmi-for-age z scores) by sex and residence



This study found the overall; under-weight, overweight and stunting among adolescents to be 6.5%, 6.8% and 15.5% respectively. Underweight and stunting were more common among males compared to female adolescents whereas overweight was significantly higher among urban females. The northern region had the highest percentage of adolescents who were under-weight, followed by Eastern while Kampala and Central had the highest number of adolescents who were overweight. The northern region especially Karamoja and the eastern region usually have droughts which affect food production which subsequently affects the nutritional status. Food and nutrition security remain the fundamental challenges,

Summary

Slightly over a half (51.7%) of the adolescents had heard of STIs and 9.6% self-reported to having ever suffered from an STI. Knowledge of STIs was low yet it is important for adolescents to have information on STIs because they indulge in risky sexual behaviors. Awareness of HIV/AIDS was very high (>90%) and almost universal in the older adolescents

(18 and 19 year olds). These findings are also similar to those of the UDHS and UAIS that were done in 2011 and 2016 [8, 14, 57] though the awareness in the UDHS was about modes of HIV transmission. Despite the very high awareness, only 42.5% of the adolescents had ever tested for HIV. This is lower than what was reported in the UDHS of 2016 in the 15-19 year age category. The HIV prevalence in this study (3%) was slightly higher than that which was reported in the UAIS of 2011 (2.4%). This could be due to the difference in the age range of the study population (10-19 years) that the current study used compared to the one of UAIS (15-19 years). Unintended pregnancies were high (41.5%). Unwanted pregnancies lead to school drop-out, un-safe abortion and its outcomes including death. Unwanted pregnancies can be prevented by use appropriate interventions such health education, counseling, skills-building, contraception education and distribution, and faith-based group or individual counseling. These will increase adolescents' knowledge and attitudes relating to risk of unintended pregnancies; promote delay in initiation of sexual intercourse and encourage consistent use of birth control methods so as to prevent unintended pregnancies [58].

5.4.2 SOCIAL OUTCOMES

SCHOOLING/ EDUCATION

School enrolment

School enrolment was assessed in this study. The gross enrolment rate (GER) defined as total enrolment by the number of age eligible for primary or secondary, thus indicating the degree of participation in school regardless of age. In this study the overall GER for primary was 199.6%; higher in males (215.2%) than females (186.6%), and in the rural (209.5%) than urban (172.4%). The GER was beyond 100% because some over-aged or under-aged pupils or repeaters were included in this estimate.

NER defined as the number of age eligible enrollees by the total number of age eligible for either primary or secondary, indicating the percent of school age eligible children who are enrolled. In this study, the overall NER for primary was 96.7%; higher in females (97.2%) than in males (96.0%), and in urban (98.4%) compared to rural (96.2%). The high NER showed that the non-enrolment rate for primary was low (3.3%) and similar between female and males, but lower in urban (1.6%) relative to rural (3.8%).

For the secondary school, overall GER was low (58.7%), but males (62.8%) had higher GER than females (56.0%), and urban (67.5%) higher than rural (54.9%). Conversely, the overall NER was similarly low, 58.4%; but was significantly higher in males (62.3%) than females (55.9%), and in the urban (66.7%) than rural (54.7%).

Summary

Primary school enrolment was high and this could be attributed to the Universal Primary Education (UPE) policy that became operational in 1997. The high overall GER for primary of 199.6% shows an over enrolment due to enrolments of either former dropouts or repeaters who are older than the age eligible school level. It is interesting to note that while as the GER is higher for males in the rural, females have a higher GER in the urban suggesting that the girl-child education programs may have a higher effect in the urban than in the rural. However, a better measure of school age eligible indicator, NER provide a sense of what percent is due in

school but not enrolled. The overall NER of 96.7% suggests a low non-enrolment of only 3.3% for the primary school eligible children aged 10-12 years. This statistic shows the success of the UPE policy in Uganda concerning enrolment and indicates an improvement since 2013 [22]. However, this indicator was still below the MDG 2 target of achieving Universal Primary Education by 2015.

Enrolment for the secondary level is still so low, despite the introduction of the Universal secondary education policy in 2007. The overall NER of only 58% suggested that 42% of secondary school age (13-18) eligible adolescents are not in school. This poor non-enrolment is worse for females (45%) compared to males (37.7%), and in rural compared to urban. These statistics show a need to improve secondary school enrolment, generally, and a special focus can be in rural and targeting female adolescents. The higher non-enrolment in secondary compared to primary may be due to a number of factors, which may include lack of secondary schools in many settings, absenteeism of Head-teachers and teachers at the secondary school level especially in the rural areas, ineffective school management committees to supervise and monitor policy implementation [22], and the culture of marrying off girls once they are 15 years or above, and males who may be pushed into petty business once they complete primary school level.

6. STRENGTHS, CHALLENGES / LIMITATIONS

Strengths

- This was a nationally representative random sample.
- The study interviewed adolescents aged 10-19 years.

Challenges / Limitations

- Adolescents with mental disabilities who did not have the capacity to understand the questions being asked and those with physical disabilities (e.g. hearing and speech impairment) were not included in the study.
- Delays in acquiring local permission. For example in; i) Kampala district where we had to engage KCCA through the Directorate of Public Health Services and Environment so as to quicken the process and ii) Lugazi sugar factory.
- In some places, call backs to meet with the district authorities were made. This had a lot of negative impact on the time spent in each EA and related financial implications (fuel, days not worked), EAs which required 1day to accomplish would literally take one and a half days, depending on time permission is granted. Thus difficult to achieve daily targets. To counteract this, in some areas the supervisors also acted advance teams to speed up the process. In Buikwe district, Musambya Camp, the team's supervisor had to hold several call backs at the district headquarters.
- Majority of enumeration areas were very distant apart and this required a lot of time for the team to travel from one enumeration area to another.
- In some of the districts, the sampled EAs were found to have been either further sub-divided or boundaries had been removed after the 2014 census. In some cases, EAs had been given different names. In Wakiso district, Central Team 2, found out that the EA name had changed from Kawuku 'q' to 'p'.
- There were a number of hard to reach areas. These were characterized by; no clear road network such as in Buyende district, mountainous/rocky terrain experienced in Zombo, Arua, Bukwo and Bududa districts.

Data collectors of Eastern Region 2 trying to push their vehicle because of bad terrain in Bududa, Bungolo Upper EA

- Poor weather and difficult terrain (either too hot or rainy). This was experienced in Arua, Zombo and Bundibugyo districts. In such cases, data collection was delayed by hours or a day, thus affecting the planned daily targets.
- Lack of trust and cooperation among some community members was experienced in one of the EAs in Kibaale district. Data collectors were mistaken for land grabbers and there was a negative reaction from the community. Consequently, data was not collected in Kyankorogoto one of the EAs in Kibaale district.
- In some EAs, the numbers of households were few and could not permit the skip patterns to be conducted.

- Some local authority/guides did not know the actual number of households and gave a range for example; 40-50 households. For example, in Rakai district, Kizinga C, the chairman estimated his EA to have only 60 households in contrast to 120 households from UBOS estimates.
- Un-planned expenses that led to revisiting of the budget.
- Data cleaning took a longer time than expected.

7. KEY FINDINGS

Key Findings:

Socio-Demographics:

- A higher percentage of adolescents were; female (54.1%), aged 10-14 years (53.4%) and Catholics (39.2%).
- Nearly all (98.8%) had ever attended school and 82.3% were currently in school.
- Nearly a half (45.6%) of adolescents were not staying with both parents and 4 in 25 (16.8%) were orphans.

Common Health Risk Behaviors

Alcohol use:

- Overall 17% of adolescents had ever drunk alcohol and 2.2% had done so in the past 30 days.
- Being male, out-of-school, older and single orphaned adolescents were associated with ever drinking.
- Main sources of alcohol were: older persons (47%) and peers (21%).
- Peers (31%), curiosity (28.4%) and parent/guardian behavior (20.1%) were the main influencers.

Sexual risk behaviors:

- One in five (21.5%) adolescents ever had sex.
- Factors associated with ever having had sex were being; out of school, older than 14 years and double orphaned.
- Among adolescents who were sexually active 10% initiated sex before 15 years of age.
- Factors associated with early sexual debut were being; out of school, resident in western region and rural area.

- Two in 5 (43.6%) had lifetime multiple partnerships.
- Lifetime multiple partnerships were higher among; 10-14 year old adolescents living in rural (38.7%) compared to those in urban areas (13.2%), and among out-of- school compared to in-school adolescents.
- Transactional sex was common (26.9%) especially among 10-14 year old females.
- Money was the most common item involved.
- Non condom use among sexually active unmarried adolescents was 57.3%.

Physical & Emotional abuse, and empowerment:

- Ever having been bullied was 39.1%, higher among older adolescents. Main forms of bullying were; teasing, spreading rumors, abusing and beating.
- Being a male, having failed a class, older age and having run away from home were associated with bullying.
- Seven in ten (73%) ever experienced violence.
- Forms of violence were; physical (60%), emotional (41.5%) and sexual (9.6%). Factors associated with violence: being male, older, alcohol and drug use.
- Nearly four in ten (37.7%) lacked knowledge about their health rights with schools and health facilities being the source of knowledge and information.
- Slightly more than half (51.6%) of adolescents were not involved in making decisions about their lives.

Nutritional and Sedentary lifestyle:

Three quarters (76.1%) did physical exercises for less than 7 days a week and one in five (21.1%) adolescents watched TV for more than 2 hours in a week.

Nearly half (48.1%) missed breakfast in past 7 days.

Individual menstrual practices

- Awareness of menstruation was high (80%) and just over a half (56.4%) had already experienced the first menstrual periods.
- Commonest materials used during menstruation were; disposable sanitary pads (52.1%), followed by reusable materials while few (1.6%) females mainly in rural (1.9%) areas did not use anything during their menstrual periods.
- Menstruation related school absenteeism was common at 26%.
- Reasons for missing schools were; felt sick or uncomfortable (64%) and lack of sanitary pads (29%).

Health and social outcomes:

*Nutritional**:***

- Over and underweight were 6.8% and 6.5% respectively whereas stunting was at 15.5%.
- Factors associated with stunting were; low socio economic status, being younger and coming from the western region.

*Reproductive health**:***

c) *Adolescent marriages, pregnancies and unintended pregnancies, and contraceptive use:*

- Only 3.8% had ever married and 3.2% were currently married.
- Only 2.2% were currently pregnant.
- Of these, 41.5% were unintended pregnancies with all the 7 pregnancies reported among the adolescents who were in school being unintended.
- More than a half (51.7%) of the adolescents did not use any contraceptive method at the last sexual encounter.

d) *STIs, HIV:*

- Thirteen percent of females and six percent of males reported having ever suffered from STIs.
- HIV awareness was very high (93.6%) but only 42.5% had ever tested for HIV.

- The most common self-reported chronic diseases among adolescents were asthma (20.7%) and hypertension (5.3%) with HIV at 3%.

Schooling:

- Gross Enrolment Ratio for primary level, an index of school enrolment, irrespective of official school age was high among males (215.2%) and females (186.6%), and in the rural (209.5%) and urban (172.4%).
- Overall Net Enrolment Ratio (NER) for primary was 96.7%, but only 58.7% for the secondary suggesting nearly 4 in 10 secondary school eligible adolescents are not enrolled even with universal secondary education policy.

Conclusions: The prevalence of common health risk behaviors among adolescents in Uganda is high with potential adverse health and social outcomes. Risky behaviors such as early sexual debut, lifetime multiple sexual partnerships and non-condom use adolescents are common. Primary school enrolment has significantly improved but barriers such as menstruation related school absenteeism, and substance and drug use remain a challenge. Access to HIV testing is still low.

Recommendations:

Innovative and responsive strategies should be designed at national, district, community, family and individual levels to address health risk behaviors that adolescents face as well as generate evidence that can further inform Uganda's progress towards achieving the SDGs. Specifically;

- Stakeholders should include 10-14 year-olds in adolescent research and Programming.
- Disentangle the 15-17 year olds from 18-19 in programming due to clear differences observed in this study.
- Parents and adolescents should be made aware of the negative effects of substance and drug use and abuse.
- Innovative strategies should be designed to stop; early initiation of sex, multiple partnerships, transactional sex and non-condom use.
- Parents and guardians should ensure that the needs of adolescents are met.

- Ministry of education and sports, and schools should integrate health education and prevention of curb all forms of violence against adolescents in schools.
- Parents, guardian and teachers should be made aware of the dangers of violence towards adolescents. Relevant stakeholders should empower parents and guardians to give health and rights information to their children.
- Physical exercises should be encouraged in schools by Ministry of education and sports, and Ministry of Health working through village health teams should ensure physical exercises for the out-of school adolescents,.
- Parents should limit duration of viewing TV programs and provide breakfast
- MOH and MOE should work with other stakeholders to encourage adolescents to undergo HIV testing and subsequent linkage to care for those who turn out to be HIV positive.
- Government and in particular MOE should address the challenge of poor secondary school enrolment.
- Government, MOH and MOE should equip schools and parents with appropriate supplies and logistics to manage menstrual related pain and discomfort

Finally, explorative qualitative research is recommended to better understand the key observations from this study and associated outcomes.

8. LESSONS

- Working collaboratively enabled us to bring out the different aspects of adolescent health since each partner has worked with adolescents unique circumstances. Thus each partner brought in his or her strengths.

- It is important to bring on board key stakeholders in the initial stages of the study so as to capture their input.

- The study shades light on the prevalence of risk behaviors and can be used as a benchmark to build on additional evidence generation including using mixed methods of data collection to capture qualitative aspects of adolescent health risk behaviors and associated outcomes that could not be explained using quantitative data

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10. APPENDICES

Appendix 1 A

List of All the 162 Enumeration areas (EA s) by region, sub-region, district and Parish

Region	Sub-Region	District	Parish	EA name
C	Central1	BUKOMANSIMBI	MALEKU	KYABIIRI 'B'
C	Central1	BUTAMBALA	KIBIBI	BAMULANZE 'A'
C	Central1	KALANGALA	MULABANA	KYAGALANYI MULABANA 'B I'
C	Central1	KALUNGU	KALIIRO	BUGGWA
C	Central1	LWENGO	SSENYA	KASWA 'B'
C	Central1	MASAKA	KYESIIGA	KABANDA 'B'
C	Central1	MPIGI	GGOLO	BUSEERA 'A'
C	Central1	RAKAI	KALAGALA	MATALE KALAGALA 'B'
C	Central1	RAKAI	KIZINGA	KIZINGA C
C	Central1	RAKAI	MUTUKULA	MUTUKULA CENTRAL 'C'
C	Central1	SEMBABULE	MITETE	LUKAKKA A 'A'
C	Central1	WAKISO	BWEYOGERERE	KIREKU MAIN 'C'
C	Central1	WAKISO	CENTRAL	NAKASAMBA 'C'
C	Central1	WAKISO	KISUBI	KAWUKU 'Q'
C	Central1	WAKISO	KITEMU-KISOZI	KISOZI B 'B'
C	Central1	WAKISO	KYALIWAJALA I	KYALIWAJJALA B 'W'
C	Central1	WAKISO	KYEBANDO I	GGANDA 'ZC'
C	Central1	WAKISO	MASAJJA I	NAMASUBA PARA 'D'
C	Central1	WAKISO	MASOOLI	KYAMBOGO 'D'
C	Central1	WAKISO	NAKYESANJA	NAKYESANJA 'C'
C	Central2	BUIKWE	BUZIIKA B	KIKUBOBUTAYI

	C	Central2	BUIKWE	KABANGA	MUSAMBYA CAMP
	C	Central2	KAYUNGA	LUSENKE	KYENGERA 'C'
	C	Central2	KYANKWANZI	MBOGOBBIRI	KAMUCHOPE 'B'
	C	Central2	LUWERO	CENTRAL	KATALE
	C	Central2	LUWERO	KABULANAKA	KABULANAKA 'A'
	C	Central2	MITYANA	KASOTA	GULWE B
	C	Central2	MITYANA	NAKIBANGA	BUTEBI A 'A'
	C	Central2	MUBENDE	KASOLOKAMPONYE	KIBUUZA 'A'
	C	Central2	MUBENDE	KIRUME	KAMILANGOMA
	C	Central2	MUBENDE	KYATO	BUWEJJE
	C	Central2	MUKONO	DDUNDU	NAKKOBA
	C	Central2	MUKONO	KABIMBIRI	KIGAYAZA I 'B'
	C	Central2	MUKONO	NAMUMIRA ANTHONY	KITEGA 'C II'
	C	Central2	NAKASEKE	KIGEGGE	MULUNGYOMU 'B'
	C	Central2	NAKASONGOLA	KIGEJJO	BURWANDI
	E	E-Central	BUGIRI	NAMASERE	BUKUTA 'C'
	E	E-Central	BUGIRI	NANKOMA	NAMUNTENGA A 'A'
	E	E-Central	BUYENDE	BUKUTULA	MPUNDE 'B'
	E	E-Central	IGANGA	CENTRAL	ZONE VI 'A'
	E	E-Central	IGANGA	IWAWU	NAWANKOFU 'A'
	E	E-Central	JINJA	BUWAGI	IBUNGU WEST 'B'
	E	E-Central	JINJA	KABYAZA	KABYAZA
	E	E-Central	KALIRO	ISALO	LUHUNGA
	E	E-Central	KAMULI	BUTENDE	NSIIMA 'B'
	E	E-Central	KAMULI	MBULAMUTI	BUSULA 'B'
	E	E-Central	LUUKA	NAMALEMBA	BULIKE 'A'
	E	E-Central	MAYUGE	BUGOTO	BUTUMBURA 'B'
	E	E-Central	MAYUGE	WANDEGEYA	WANDEGEYA A 'A'
	E	E-Central	NAMAYINGO	BUWOYA	BUKEDA 'B'
	E	E-Central	NAMUTUMBA	NABISOIGI	NABISOIGI II 'B'

	E	M-East	BUDUDA	BUNABUTITI	BUNGOLO UPPER
	E	M-East	BUKWO	KIRETEI	KAPSIYWO
	E	M-East	BULAMBULI	MASABA	ELGON
	E	M-East	BUSIA	BUWEMBE	SYONGA
	E	M-East	KIBUKU	PULAKA	PULAKA KENYA
	E	M-East	MANAFWA	BUSIMAOLYA	BUWASIBA
	E	M-East	MBALE	BUKASAKYA	BUGEMA A 'B'
	E	M-East	MBALE	BUSAMAGA WEST	HEALTH CENTRE
	E	M-East	MBALE	NABWEYE	MAFUTU
	E	M-East	PALLISA	OMUKULAI	OTAMIRIO 'B'
	E	M-East	PALLISA	WEST	CENTRAL A CELL
	E	M-East	SIRONKO	BUMUDU	BUMUDU B
	E	M-East	TORORO	AMONI	AMAGORO A
	E	M-East	TORORO	MULANDA	PASINDI ORUWA 'B'
	E	M-East	TORORO	SOUTHERN	BULERI 'B'
	E	N-East	AMURIA	AKOROMIT	AMUKURAT
	E	N-East	BUKEDEA	BUKEDEA	BUKEDEA 'B'
	E	N-East	KABERAMAIDO	KIBIMO	ARONGO
	E	N-East	NGORA	AKARUKEI	AKARUKEI 'A'
	E	N-East	SERERE	OMAGARA	OCUPO 'A'
	E	N-East	SOROTI	DAKABELA	ARUBELA
	K	Kampala	KAMPALA	BUKASA	MUGALU 'B'
	K	Kampala	KAMPALA	BUKESA	KAKAJO II 'D'
	K	Kampala	KAMPALA	BUKOTO I	MUKALAZI 'C'
	K	Kampala	KAMPALA	KABALAGALA	MUZAANA 'A'
	K	Kampala	KAMPALA	KABOWA	SIMBWA 'F'
	K	Kampala	KAMPALA	KANYANYA	KIYANJA 'F'
	K	Kampala	KAMPALA	KASUBI I	KAWAALA II 'D'
	K	Kampala	KAMPALA	KAWEMPE II	NAMERE 'G'
	K	Kampala	KAMPALA	KIBULI	LUBOWA 'A'

K	Kampala	KAMPALA	KIWATULE	BALINTUMA 'G'	
K	Kampala	KAMPALA	KYEBANDO I	ERISA 'E'	
K	Kampala	KAMPALA	LUBYA	MASANAFU BUKULUGI 'C'	
K	Kampala	KAMPALA	LUKULI	BRUNO A'	
K	Kampala	KAMPALA	MAKERERE II	ZONE C 'A'	
K	Kampala	KAMPALA	MAKINDYE I	WATER PUMP 'B'	
K	Kampala	KAMPALA	MBUYA I	KAGGO 'D'	
K	Kampala	KAMPALA	MENGO	YOANA MARIA 'A'	
K	Kampala	KAMPALA	MULAGO III	EAST NSOOBA 'F'	
K	Kampala	KAMPALA	MUTUNDWE	KIGAGGA 'B'	
K	Kampala	KAMPALA	MUTUNGO I	ZONE IX 'F'	
K	Kampala	KAMPALA	NANKULABYE I	ZONE IV 'G'	
K	Kampala	KAMPALA	SALAAMA	KIGAAGA 'H'	
N	M-North	AGAGO	KAKET	BETHELEM	
N	M-North	ALEBTONG	AWORI	OKUT	
N	M-North	AMURU	LUJORO	ONENCARO 'B'	
N	M-North	APAC	ALUKA	TOPEYERO 'B'	
N	M-North	APAC	AMII AMILO	AMWONYOCAO A	
N	M-North	DOKOLO	WESTERN	ATAMA 'B'	
N	M-North	GULU	GEM	LAGUDE 'A'	
N	M-North	GULU	TEGWANA	LAYIBI CENTRAL A & B 'J'	
N	M-North	KITGUM	OKOL	KITIBOL	
N	M-North	KOLE	BARONGIN	OTIRI	
N	M-North	LAMWO	LICWAR	LICWAR CENTRAL 'B'	
N	M-North	LIRA	APUCE	AYANG	
N	M-North	LIRA	STARCH FACTORY	STARCH FACTORY B 'B I'	
N	M-North	OTUKE	BARJOBI	BARJOBI	
N	M-North	OYAM	AMWA	ABAKO	
N	M-North	OYAM	OGWANGAPUR	OTWEE A	
N	M-North	PADER	PALWO	LAPEDE WEST	

N	N-East	KOTIDO	KAMOR	KAMOR NORTH 'B'
N	N-East	MOROTO	OLD CAMP-SWAHILI	LABOUR LINE 'B'
N	N-East	NAKAPIRIPIRIT	LORENG	LORENG 'B'
N	N-East	NAPAK	NABWAL	NATUROBINYA 'B'
N	W-Nile	ADJUMANI	MGBERE	DZAIPI CENTRAL 'A'
N	W-Nile	ARUA	ALIBA	FORIA 'A'
N	W-Nile	ARUA	MARAJU	ODROA
N	W-Nile	ARUA	ODRAVU	ODUA
N	W-Nile	KOBOKO	NYOKE	ABACHI
N	W-Nile	MARACHA	OTRAVU	SUSUNI 'B'
N	W-Nile	MOYO	AYIRO	PATABOPAGONYIDRA
N	W-Nile	NEBBI	ABAR EAST	OBIA
N	W-Nile	NEBBI	MUKALE	AYILA CENTRAL
N	W-Nile	YUMBE	ALIAPI	YEREGODRE
N	W-Nile	ZOMBO	JUPADINDO	LAIMO
W	M-Western	BUNDIBUGYO	BHAMBA	BUNDIMBEBE III
W	M-Western	HOIMA	KYABISAGAZI	KYABISAGAZI II 'A'
W	M-Western	HOIMA	MUNTEME	KIGABU 'B'
W	M-Western	KABAROLE	NYABWEYA	NYABWEYA A
W	M-Western	KABAROLE	PIIDA	BUTINI 'B'
W	M-Western	KAMWENGE	BWIZI	NYABWINA 'A'
W	M-Western	KAMWENGE	KITONZI	KITONZI A 'A'
W	M-Western	KASESE	KAMBUKAMABWE	KATHERO 'A'
W	M-Western	KASESE	LYAKIREMA	KABAGHOLE 'B'
W	M-Western	KIBAALE	NKONDO	KAMWANDA
W	M-Western	KIBAALE	NYAMACUMU	KYANKOROGOTO
W	M-Western	KIBAALE	NYAMITI	KYAMURODO
W	M-Western	KIBAALE	RUBUMBO	RUTOOMA B 'B'
W	M-Western	KIRYANDONGO	KIIGYA	KADUKU II 'A'
W	M-Western	KYEGEGWA	RUTARAKA	KAZINGA CENTRAL 'B'

	W	M-Western	KYENJOJO	KIGUNDA	NYABUBALE
	W	M-Western	MASINDI	KASENENE	ONIENI 'B'
	W	M-Western	MASINDI	SOUTHERN	KIRASA I 'A 'II'
	W	M-Western	NTOROKO	KAMUGA	KAMUGA 'A'
	W	S-Western	BUSHENYI	KIZINDA	KIZINDA TRC 'A'
	W	S-Western	IBANDA	KYENGANDO	BWERA I
	W	S-Western	ISINGIRO	KIRYABURO	RWANKAKIRI
	W	S-Western	ISINGIRO	RWANGUNGA	KAGABAGABA
	W	S-Western	KABALE	KIYEBE	MATAKA
	W	S-Western	KABALE	NYAKAGYERA	OMWIBAARE
	W	S-Western	KANUNGU	KIGARAMA	SAMARIA
	W	S-Western	KIRUHURA	RWANYANGWE	MABAARE
	W	S-Western	KISORO	MUHINDURA	KIBANDE 'A'
	W	S-Western	MBARARA	RUTI	KIREHE 'A'
	W	S-Western	MBARARA	RWEIBOGO	KATERERO
	W	S-Western	MITOOMA	RUBIRIZI	KABAHETSI
	W	S-Western	NTUNGAMO	KYARWEHUNDE	RWEMBOGO
	W	S-Western	NTUNGAMO	NSHENYI	RWEMBOGO
	W	S-Western	RUBIRIZI	NDAGARO	NKOMBE II
	W	S-Western	RUKUNGIRI	KAHOKO	MURAARO
	W	S-Western	SHEEMA	KIHUNDA	NYAMIKO 'A'

Key for the Regions: E=Eastern; W=Western; K=Kampala; N=Northern; C=Central

Appendix 1B: The Kish-Tables

Table Number	If the number of adolescents in household is:					
	1	2	3	4	5	6 or more
	Select adolescent numbered:					
A	1	1	1	1	1	1
B1	1	1	1	1	2	2
B2	1	1	1	2	2	2
C	1	1	2	2	3	3
D	1	2	2	3	4	4
E1	1	2	3	3	3	5
E2	1	2	3	4	5	5
F	1	2	3	4	5	6

KISH procedure: All randomly selected households were serialized with numbers 1 to 34 in each Enumeration area (EA). Each selected household was then assigned serial number, and randomly assigned one of 8 Kish-Table (A-F) as shown above. All household members were listed on a household listing form. All eligible (10-19 years) were identified and ranked in descending order of age starting with males first, then followed by females. Using a KISH-table that corresponded with the household # and the total number of eligible household members provided the rank # of the respondent.

Appendix 1C: Household characteristics (un-weighted count)

Table 1a1: Social- demographic household characteristics (un-weighted count)

Characteristic	Region (n)					
	Central	East	Kampala	North	Western	**Total**
Overall	1045	1079	660	925	1006	4715
Sex [a]						
Female	775	673	489	487	643	3067
Male	251	378	157	414	354	1554
Age of the HH respondent: mean $\pm$ SD	39.7 $\pm$ 13.8	40.6 $\pm$ 12.4	36.6 $\pm$ 10.9	41.0 $\pm$ 12.3	41.4 $\pm$ 13.6	40.4 $\pm$ 13.1
Average number of persons in a HH: median (IQR)	6 (4,8)	7 (5,9)	5 (4,7)	6 (5,8)	6 (5,7)	6 (5,8)
Religion [b]						
Catholic	410	329	206	570	348	1863
Anglican	266	404	150	194	442	1456
Pentecostal	150	125	136	71	105	587
Muslim	178	169	149	64	59	619
Other Christians: i.e. SDA, JW	15	40	7	5	16	83
Other (i.e. No religion, traditional)	21	8	5	0	36	70
Education [c]						
Never attended school	122	146	33	235	217	753
Primary	554	597	208	493	640	2492
Secondary	262	255	321	111	102	1051
Tertiary	79	53	78	44	26	280
Median monthly income per HH '000: median (IQR)	150 (60,400)	75 (30, 200)	300 (200, 600)	70 (30, 200)	100 (45,200)	100 (50, 300)

Un-weighted count (N), Missing data: [a]94, [b]37, [c]139

Table 1b1: Health and living household characteristics (un-weighted count)

Characteristic	Residence (n)					
	Central	East	Kampala	North	Western	**Total**
Overall	1045	1079	660	925	1006	4715
Whether the HH has a child with mental illness ¥ [a]						
Yes	49	34	15	17	46	161
No	992	1039	638	893	959	4521
Slept in a mosquito net [b]						
Yes (Treated bed-net)	596	535	364	603	678	2776
Yes (Untreated bed-net)	140	168	82	77	88	555
No net	217	269	181	143	185	995
Household member suffered from any illness or injury in past 30 days [c]						
Yes	674	718	352	491	651	2886
No	367	355	300	418	352	1792
Number of bed rooms in the house: median (IQR)	3 (2,4)	3 (2,4)	2 (1,3)	3 (2,4)	4 (3, 5)	3 (2,4)
Household's source of drinking water [d]						
Open (River, Stream, unprotected well)	331	119	151	170	490	1261
Closed (Tap, Bore hole, protected spring)	697	955	504	737	509	3402
Roofing materials [e]						
Modern (i.e. Iron sheets, Asbestos, tiles)	995	794	656	231	916	3592
Traditional (i.e. Thatch, Wood planks)	41	284	1	677	89	1092

¥ Only 72 (48.6%) were receiving treatment for the mental illness. Missing data: [a]33, [b]389, [c]31, [d]52, [e]23

Appendix 1D: Adolescent characteristics (un-weighted count)

Table 2a1: Number of adolescents by demographic characteristics (count)

Characteristic	Region (n)					Total
	Central	East	Kampala	North	Western	
Overall	1045	1079	660	925	1006	4715
Sex [a]						
Female	604	590	376	452	523	2545
Male	439	478	284	473	482	2156
Age category (Years) [b]						
10-14	609	541	321	480	527	2478
15-17	268	322	197	286	286	1359
18-19	167	215	141	158	193	874
Religion [c]						
Catholic	388	345	200	591	355	1879
Anglican	258	384	133	189	429	1393
Pentecostal	155	123	137	72	113	600
Muslim	205	182	177	70	60	694
Other Christians: i.e. SDA, JW	20	34	8	0	17	79
Other (i.e. No religion, traditional)	19	10	2	1	28	60

SDA- Seventh Day Adventist, JW- Jehovah's witness, Missing data: [a]14, [b]4, [c]10

Table 2b1: Number of adolescents by schooling and employment status (count)

Characteristic	Region (n)					Total
	Central	East	Kampala	North	Western	
Overall	1045	1079	660	925	1006	4715
Education						
Ever attended school [a]	1042	1072	657	867	994	4632
Currently in school [b]	857	933	513	710	789	3802
Ever failed a class	322	431	124	374	428	1679
Ever worked in the past 12 months [c]						
Yes	605	664	401	529	598	2797
No	437	412	256	385	407	1897

Missing data: [a]83, [b]913, [c]21

Table 2c1: Orphan status and living arrangement characteristics (un-weighted count)

Characteristic	Region (n)					
	Central	Eastern	Kampala	Northern	Western	Total
Overall	1045	1079	660	925	1006	4715
Both father and mother are alive [a]						
Yes	845	924	514	718	844	3845
Only mother alive	124	100	89	135	109	557
Only father alive	39	30	28	28	26	151
Both not alive	26	17	23	33	22	121
Adolescent currently lives with [b]						
Both parents	458	648	233	597	572	2508
Single parent	293	220	230	174	209	1126
Guardian(s)	189	133	99	80	104	605
Self	24	19	30	13	17	103
Other (Friend, sibling)	79	56	68	56	102	361
Shared bedroom with whom[π]						
Sibling	233	273	70	81	64	721
Parent	10	19	6	6	2	43
Other (i.e Relative)	28	40	5	13	10	96

[π] 3576 (76.6%) of the 4670 shared a bedroom. Missing data: [a]41, [b]12

Appendix 1E: Study tool

QUESTIONAIRES

10.1. ANNEX C1: HOUSEHOLD QUESTIONNAIRE - 1 (TO BE ADMINISTERED TO THE HOUSEHOLD HEAD)

SECTION1A: HOUSEHOLD IDENTIFICATION PARTICULARS				
Unique Identifier (use your initials, EA number and Number of interview e.g				
1. District Name				
2. County/Municipality				
3. Sub-County/Division/Town Council				
4. Parish/Ward				
5. EA				
6. LC Village Name				
7. Rural/Urban (*Urban =1; Rural =2*)				
8. Household Sample Number				
10. Name of Data collector				

SECTION 1B. HOUSEHOLD SOCIOECONOMIC AND DEMOGRAPHIC CHARACTERISTICS					
NO.	QUESTIONS AND FILTERS	CODING CATEGORIES			
HD01	START TIME: _____ END TIME: _____	DATE HOUR			
HD02	CIRCLE CODE FOR SEX OF RESPONDENT	MALE FEMALE			1 2
HD03	How many people live in your household? (Include both children and adults)				
HD04	How many regular members of your household are aged 10-19 years?		Male	Female	
		10-14			
HD05	To which ethnic group or tribe do you belong?				

HD06	What is your religion?	Catholic Protestant Pentecostal/Charismatic Muslim Other Christian Traditional Religion	1 2 3 4 5 6
HD07	How old were you at your last birthday? **Age in completed years**		
HD08	What is the highest level of school you have attended?	Never attended school Primary Secondary	0 1 2
HD09	How many rooms are in your house?	……	
HD10	How many rooms are used for sleeping in?	……(b	
HD11	What is the major construction material of the roof?	Thatch, Straw Mud Wood, Planks Iron sheets Asbestos Tiles Tin Concrete/ Cement	1 2 3 4 5 6
HD12	What is the major construction material of the floor?	Earth Earth and cow dung Cement Mosaic or tiles Bricks Stone	1 2 3 4 5 6
HD13	What is the main source of water for drinking for your household?	Private connection to pipeline (Tap) Public taps Bore-hole Protected well/spring Unprotected well/spring River, stream, lake, pond Vendor/Tanker truck	1 2 3 4 5 6 7 8

HD14	What type of toilet is <u>mainly</u> used in your household? (Please Observe)	Covered pit latrine private Covered pit latrine shared VIP latrine private VIP latrine shared Uncovered pit latrine Flush toilet private Flush toilet shared Bush Other (specify)	1 2 3 4 5 6 7
HD15	What is the main fuel used for lighting in this household?	Electricity Biogas Solar Kerosene Candles	1 2 3 4 5
HD16	What is the main fuel used for cooking in this household?	Electricity LPG (liquefied petroleum gas) Natural gas Biogas Kerosene Charcoal Wood Straw/shrubs/grass. Agricultural crop/ residues	1 2 3 4 5 6 7 8 9

HD17	Does your household have the following items? **Please read out each item and circle yes or no**		**Yes**
		House	1
		Other Buildings	1
		Land	1
		Furniture/Furnishings	1
		Household Appliances e.g. Kettle, Flat iron	1
		Television	1
		Radio/Cassette	1
		Generators	1
		Solar panel/electric inverters	1
		Bicycle	1
		Motor cycle	1
		Motor vehicle	1
		Boat	1
		Other Transport equipment	1
HD18	What's your household average income per month?	…….. (Per month. If per day multiply by 30)	
HD19	About how much is spent to purchase household items (food, utilities, clothes,) per month	…… (Per month. If per day multiply by	
HD20	Did every adolescent in this household sleep under a mosquito net last night?	Yes, Untreated Mosquito Net Yes, Insecticide Treated Net Some sleep under Untreated Net Some sleep under Treated Mosquito net No Don't Know	1 2 3 4 5
HD21	During the past 30 days, has any household member suffered from any illness or injury?	Yes No	1 2 Skip

HD22	Did the household member consult a health provider or visit a health facility?	Yes No	1 Skip to H
HD23	If no consultation or visit to the health facility was made, what was the reason?	Illness mild Facility too far Hard to get to facility Too dangerous to go Available facilities are too costly No qualified staff present Staff attitude not good Too busy / long waiting time Facility is inaccessible Facility is closed	1 2 3 4 5 6 7 8 9 1
HD24	Do you have any child 10 to 19 years with mental illness/ issues in your	Yes No **(If no, end HH**	1
HD25	If yes, how many are they?		
HD26	Are the children receiving treatment/care?	Yes No	1 2

	Male	Female
10-		

END TIME:

THANK YOU FOR YOUR TIME

Is the selected adolescent 10-17 years old?

Yes=1 If yes, administer consent form on behalf of adolescent

No=2 If No (18-19yrs) administer consent to adolescent.

10.2. ANNEX C2: ADOLESCENT QUESTIONNAIRE (10-19 YEAR OLDS)

	HEAD OF HOUSEHOLD QUESTIONNAIRE COMPLETED FOR THIS HOUSEHOLD: Insert Unique ID **YES ☐ NO ☐** **FOR EACH QUESTION, PLEASE CIRCLE A NUMBER.** **START TIME:_____** **END TIME:_____**		
	Adolescent Background Characteristics		
SD01	Sex of the Adolescent	Male 1 Female 2	
SD02	How old are you? **(as of last birthday)**	Years Old ☐☐ Don't Know 98 Declined 99	
SD03	Have you ever attended school?	Yes 1 No 2	SKIP TO SD08
SD04	Are you currently in school?	Yes 1 No 2	SKIP T

			OSD07
SD05	In what class are you?		
SD06	Have you ever failed any classes?	Yes 1 No 2	
SD07	**For out of School adolescents only**: What is the highest level of school you attended?		
SD08	What is your religion?	Catholic 1 Protestant 2 Pentecostal/Charismatic 3 Muslim 4 Other Christian 5 Traditional Religion 6 No Religion 7 Other (Specify) 96	
SD09	Have you done any work in the last 12 months? By work, I mean any activity to earn money or obtain food.	Yes 1 No 2 →	SKIP TO SD12
SD10	If Yes, describe briefly the main work or job that you did?	Sales/services 1 Unskilled manual 2 Household/domestic 3 4	

		Crop farming 5 Livestock rearing 6 Fishing 7 Manufacturing 8 Sex 96 Others (Specify)	
SD11	How old were you when you started doing this?		
SD12	Are both your mother and father alive?	Both alive 1 Mother alive 2 Father alive 3 Both not alive 4 Don't know 98	
The next questions ask about your HOME ENVIRONMENT			
HE01	Who are you currently living with?	Both my mother and father 1 Mother alone 2 Father alone 3 With male guardian 4 With female guardian 5 With both male and female guardian 6 By myself 7 Other, specify: _____ 96	
HE02	How easy is it to talk to your parent/guardian about things that are important to you?	Easy 1 Difficult 2	

	Note: For mature minors inquire about talking to spouse	Don't know 98	
HE03	Have you ever discussed sex-related matters with your parent(s)/guardian(s)? If YES, Often or occasionally?	Often 1 Occasionally 2 Never 3	
HE04	Do you consult your parents/guardian when you have a problem?	Yes 1 No 2	
HE05	Have you ever run away from home?	Yes 1 No 2 Declined to answer 99	
I would like to ask you about your house and sleeping arrangement			
HE06	How many bedrooms does your house have?	…… (rooms)	
HE07	Do you share a bedroom?	Yes 1 No 2	SKIP TO DI01
HE08	If Yes, with whom? Circle all that apply	Sister 1 Brother 2 Mother 3 Father 4 Other, (Specify) _____ 96	
THE NEXT QUESTIONS ASK ABOUT DIETARY INTAKE DURING THE PAST 7 DAYS. THINK ABOUT			

ALL THE MEALS AND SNACKS YOU HAD FROM THE TIME YOU GOT UP UNTIL YOU WENT TO BED. BE SURE TO **INCLUDE FOOD YOU ATE AT HOME, AT SCHOOL, AT RESTAURANTS, OR ANYWHERE ELSE.** **(DI).**			
DI01	During the past 7 days, on how many days did you eat breakfast?	……..days	
DI02	During the past 7 days, how many days did you eat/drink fruit such as mangoes, pawpaws, apples etc?	……..days	
DI03	During the past 7 days, how many days did you eat green leafy vegetables?	……..days	
DI04	During the past 7 days, how many days did you eat carrots?	……..days	
DI05	During the past 7 days, how many days did you eat carbohydrate foods e.g potatoes, Cassava, posho etc? (Do not count french fries, fried potatoes, or potato chips.)	……..days	
DI06	During the past 7 days, how many days did you drink a can or bottle or glass of soda or pop, such as Coke, Pepsi, or Sprite, jolly jus, safi, add local options?	……..days	
DI07	During the past 7 days, how many days did you drink milk?	……..days	
THE NEXT QUESTIONS ASK ABOUT PHYSICAL ACTIVITY (PA).			
PA01	During the past 7 days, on how many days were you physically	0 days 0	

	active for a total of at least 60 minutes per day? (Add up all the time you spent in any kind of physical activity that increased your heart rate and made you breathe hard some of the time.)	1 day 1 2 days 2 3 days 3 4 days 4 5 days 5 6 days 6 7 days 7	
PA02	In a week, on how many days do you do physical exercise?	I don't exercise 0 1 day 1 2 days 2 3 days 3 4 days 4 5 days 5 6 days 6 7 days 7	SKIP TO PA04
PA03	In a typical day when you have exercised, how long do you spend exercising?		
PA04	Now I would like to ask you about watching TV. In a day, how many hours do you watch TV?	I do not watch TV/ don't have TV 0 Less than 2 hours per day 1 2-4 hours per day 2 5 or more hours per day 3	
PA05	In a day, how many hours do you play video or computer games or use a computer for something that is not school work? (Count time spent on things such as	I do not play video or computer games or use a computer 0 Less than 2 hours per day	

	Xbox, PlayStation, an iPod, an iPad or other tablet, a smartphone, YouTube, Facebook or other social networking tools, and the Internet.)	2-4 hours per day 1 5 or more hours per day 2 3	
PA06	Considering local games and gambling activities such as Ludo, playing cards, omweso, sports betting. During the past 7 days, how many days did you spend in such activities?		
THE NEXT QUESTIONS ASK ABOUT NUTRITION STATUS (NS).			
NS01	How do **you** perceive your weight? (Probe for response)	Very underweight 1 Slightly underweight 2 About the right weight 3 Slightly overweight 4 Very overweight 5	
NS02	Which of the following are you trying to do about your weight?	**Lose** weight 1 **Gain** weight 2 **Stay** the same weight 3 I am **not trying to do anything** about my weight 4	
NS03	Measure Height and Weight (Take 3 readings each corresponding to R1, R2 and R3)		

	R1	R2	R3
Height			
Weigh			

		t	
THE NEXT QUESTIONS ASK ABOUT OTHER HEALTH-RELATED TOPICS (HR).			
HR01	Has a health worker ever told you that you have any long term (chronic) disease?	Yes 1 No 2	SKIP TO HR03
HR02	If Yes, what disease (s) is it?	Asthma 1 Hypertension 2 Diabetes 3 HIV/AIDS 4 Others (Specify) 96	
HR03	On an average night, how many hours of sleep do you get?	4 or less hours 1 5 hours 2 6 hours 3 7 hours 4 8 hours 5 9 hours 6 10 or more hours 7	
THE NEXT QUESTIONS ASK ABOUT ALCOHOL CONSUMPTION. (AC) This includes drinking beer, spirits, wine, wine coolers, and liquor such as rum, gin, vodka, or whiskey. For these questions, drinking alcohol does not include drinking a few sips of wine for religious purposes.			
AC01	Have you ever drunk alcohol?	Yes 1 No 2	SKIP TO TU

			01
AC02	How old were you when you first drunk alcohol?		
AC03	How did you get the alcohol that you drunk? (Select only **one main** response.)	I bought it in a shop/supermarket 1 I gave someone else money to buy for me 2 An older person 3 A friend/ peer 4 Others (specify) 96	
AC04	What influenced you to start using the alcohol?	Peer influence 1 To look and feel grown up 2 Modeling parent's/guardian's behavior 3 Curiosity 4 Boredom 5 Ignorance 6 Others, specify 7 8	
AC05	During the past 30 days, on how many days did you have at least one drink of alcohol?		
DRUNKENNESS: Staggering when walking, not being able to speak right, and throwing up are some signs of being really drunk OR losing your reasoning capacity			
AC06	In the past 30 days, how many times have you been drunk?		
THE NEXT QUESTIONS ASK ABOUT TOBACCO USE (TU).			
TU01	Have you ever tried smoking?	Yes 1 No 2	SKIP

			TOTU07
TU02	What is it that you smoked?	Tobacco 1 Shisha 2 Others (Specify)	
TU03	How old were you when you started smoking		
TU04	During the past 30 days, have you smoked? If yes, specify what you smoked……	Yes 1 No 2	Skip to TU07
TU05	During the past 30 days, how many times have you smoked?		
TU06	During the past 30 days, how did you **usually** get what you smoked? **(Select only one main response.)**	I bought them in a shop/supermarket 1 I gave someone else money to buy for me 2 An older person 3 A friend/peer 4 Others (specify) 96	
TU07	Has anyone smoked in your presence in the past 30 days?	Yes 1 No 2	
TU08	Does any member in this household smoke?	Yes 1 No 2	SKIP TO TU

			10
TU09	What is it they smoke?		
TU10	Do any of your friends smoke?	Yes 1 No 2	SKIP TO MU01
TU11	What is it that they smoke? (Circle all that apply)	Tobacco 1 Shisha 2 Others (Specify) 96	
TU12	What influenced you to start smoking?	Peer influence 1 To look and feel grown up 2 Modeling parent's/guardian's behavior 3 Curiosity 4 Boredom 5 Ignorance 6 Others, specify 7 8	
THE NEXT QUESTIONS ASK ABOUT MARIJUANA USE (MU).			
MU01	Have you ever used marijuana?	Yes 1 No 2	SKIP TO OD01
MU02	How old were you when you		

	tried marijuana for the first time?		
MU03	The last time you used marijuana, where did you get it from?	I bought them in a shop/supermarket 1 I gave someone else money to buy for me 2 An older person 3 A friend/peer 4 Others (Specify) 96	
MU04	What influenced you to start using marijuana	Peer influence 1 To look and feel grown up 2 Modeling parent's/guardian's behavior 3 Curiosity 4 Boredom 5 Ignorance 6 Others, specify 7	
THE NEXT QUESTIONS ASK ABOUT OTHER DRUGS (OD).			
OD01	Have you ever used **any** other form of drugs?	Yes 1 No 2	SKIP TO FM01 FOR FEMALES & SB

			01 FORMALES
OD02	In what form do you use these drugs?	Injectable 1 Sniff 2 Chew 3 Smoke 4 Others (specify) 96	
OD03	What did you use?	Cocaine 1 Khat 2 Heroin 3 Petroleum 4 Kuba 5 Others (specify) 96	
OD04	How did you get the drug you used? (Select only **main one** response.)	I bought them in a shop/supermarket 1 I gave someone else money to buy for me 2 An older person 3 A friend/peer 4 Others (specify) 96	
OD05	What influenced you to use the drug?	Peer influence 1 To look and feel grown up 2	

		Modeling parent's/guardian's behavior 3 Curiosity 4 Boredom 5 Ignorance 6 Others, specify 7	
THE NEXT QUESTIONS ASK ABOUT FEMALE MENSTRUATION (FM) (ONLY FEMALES)			
FM01	Have you heard of the term 'menstruation' or having one's period?	Yes 1 No 2	SKIP TO SB01
FM02	Have you had your first period?	Yes 1 No 2	SKIP TO SB01
FM03	What do you mainly use during periods?	Cloth/cloth pads 1 Disposable sanitary napkins/pads 2 Tampons/menstrual cups 3 Other (specify) 96	
FM04	Have you ever missed school because of your period?	I'm not in school 1 Yes – one time 2 Yes – more than once 3 Never 4 N/A (Never been to school) 5	SKIP TO SB01

FM05	What is it that made you miss school related to your menstruation?	Lack of sanitary pads 1 Classmates made fun of me 2 Feeling sick 3 Others (specify) 96	
THE NEXT QUESTIONS ASK ABOUT SEXUAL BEHAVIORS (SB).			
SB01	Some young people of your age have boy/girlfriends. Do you have a boy/girlfriend?	Yes 1 No 2	SKIP TO SB03
SB02	What funny things do you do with your boy/girlfriend? Unprompted and circle all that apply	Drinking alcohol 1 Smoking 2 Touching 3 Kissing 4 Sexual intercourse 5 None 6 Others (Specify) 96	
SB03	Some young people of your age talk about sex: What is your understanding of sex?	Touching 1 Kissing 2 Sexual intercourse 3 Others (specify) 96 Don't know 98 Declined to respond 99	

		9	
SB04	Have you ever kissed or been kissed?	Yes 1 No 2	
SB05	Also some young people of your age have had sexual intercourse before, how about you?	Yes 1 No 2	SKIP TO HV01
SB06	How old were you when you had sexual intercourse for the first time?		
SB07	With how many people have you ever had sexual intercourse?		
SB08	The last time you had sexual intercourse; did you or your partner use a condom?	Yes 1 No 2	
SB09	The last time you had sexual intercourse, what methods did you or your partner use to prevent pregnancy?	No method was used to prevent pregnancy 1 Birth control pills 2 Condoms 3 An IUD (such as Mirena or ParaGard) or implant (such as Implanon or Nexplanon) 4 A shot (such as Depo-Provera), patch (such as Ortho Evra), or birth control ring (such as NuvaRing) 5 Withdrawal or some other method 6 Don't know/Not sure 98 Skipt	SKIP TO SB11

		o SB11 Skip to SB11	
SB10	Where did you get the contraceptive from?	Shop 1 Pharmacy 2 Govt. Clinic/Health Centre/Hospital 3 Private Doctor/Nurse/Clinic 4 Friend 5 Other……. 96 Don't know 98	
SB11	Did you drink alcohol or use drugs before you had sexual intercourse the last time?	Yes 1 No 2	
SB12	Some young people receive money or gifts in exchange for sexual intercourse. Has this ever happened to you?	Yes 1 No 2 →	SKIP TO

			SB17
SB13	What did you receive? **(Circle all mentioned)**	Money 1 Food 2 Good Grades 3 School Fees 4 Employment 5 Gifts/Favors 6 TRANSPORT 7 Shelter/Rent 8 Protection 9 Other *(Specify)* 96 _____ Don't Know 98 Declined 99	
SB14	Was this person older than you?	Yes 1 No 2	SKIP TO SB16
SB15	If yes, how old was the person?	More than 10 years older 1 5-10 years older 2 Less than 5 years older 3 Don't know 98 Declined 99	

		9	
SB16	What was your relationship with the person who asked you to have sex? **(Circle all mentioned)**	Friend 1 Teacher 2 Community/ Religious Leader 3 Employer 4 Romantic Partner 5 Ex-Romantic Partner 6 Classmate/Schoolmate 7 Neighbor 8 Police/Security Person 9 Truck Driver 10 Stranger 11 Person I Met On The Internet 12 Other Person (Specify)____ 96	
SB17	How did you learn about sexual acts?		
THE NEXT QUESTIONS ASK ABOUT PREGNANCY (PR)			
PR01	**Ask MALES:** Have you ever made a girl or woman pregnant?	Yes 1 No 2	SKIP TO MS01
PR02	**Do you have any child(ren)?**	Yes 1	

		No 2	
PR03	**Ask FEMALES:** Have you ever been pregnant?	Yes 1 No 2	SKIP TO MS01
PR04	**Do you have any child(ren)?**	Yes 1 No 2	
PR05	When was the last time you were pregnant?	_____ Years	
PR06	Are you currently pregnant?	Yes 1 No 2	
PR07	Thinking of the most recent pregnancy, did you want the pregnancy at that time or did not want it?	I wanted it 1 I did not want it 2	
PR08	What happened to the (last) pregnancy?	Currently pregnant 1 Abortion 2 Miscarriage 3 Live-birth 4 Stillbirth 5	IF 1, 2, 3 OR 5 SKIP TO HV01

PR09	If the pregnancy ended in a live birth, where is the child currently?	Staying with me 1 Staying with my mother 2 Staying with my grandmother 3 Staying with my sister 4 Other Person (Specify)____ 96	
MARITAL STATUS (MS)			
MS01	Have you ever been married?	Yes 1 No 2	SKIP TO HV01
MS02	If yes, for how long have you been married?		
MS03	Are you still married?	Yes 1 No 2	
MS04	If No, why did you get out of marriage?	Wanted to go back to school, 1 Was advised to leave the marriage 2 I felt I was still young 3 Others, specify 96	
SEXUALLY TRANSMITTED INFECTIONSTI/HIV/AIDS **REMEMBER THAT EVERYTHING YOU SAY WILL BE CONFIDENTIAL**			
HV01	**STIs:** Apart from HIV/AIDS, there are other diseases that men and women can catch by having sexual intercourse. Have you heard of any of sexually	Yes 1 No 2	SKIP TO H

	transmitted infections/ diseases (STDs/ STIs)?		V 04
HV02	What are the signs and symptoms of sexually transmitted illness? (Circle all that apply)	Unusual discharge from penis/ Vagina 1 Pain during urination 2 Irritation in genital areas 3 Don't know 98 Others Specify 96	
HV03	Have you ever suffered from a sexually transmitted disease?	Yes 1 No 2	
HV04	Now I would like us to talk about something else. Have you ever heard of an illness called HIV/AIDS?	Yes 1 No 2	SKIP TO RD 01
HV05	People can be tested for HIV, Have you ever heard of HIV testing?	Yes 1 No 2	SKIP TO HV 11
HV06	Have you ever tested for HIV?	Yes 1 No 2	SKIP TO HV 10
HV07	If Yes, would you be willing to share your results?	Yes 1 No 2	**SKIP**

			TO HV 12
HV08	What was the result?	HIV+ 1 HIV- 2 Results not given 3 Don't know 9 Declined to respond 8 9 9	**SKIP TO HIV 12**
HV09	If HIV+, are you receiving treatment?	Yes 1 No 2	**SKIP TO HV 12**
HV10	If No, What is the main reason you have never been tested?	Don't Know Where To Get HIV Test 1 Test Costs Too Much 2 Transport To Test Site Is Too Much 3 Test Site Too Far Away 4 Afraid Husband/Partner Will Know About Test/Test Results 5 6 Afraid Others Will Know About Test/Test Results 7 Don't Need Test/Low Risk 8 Don't Want To Know If I Have HIV 9 Other(Specify)_____ 9 6 Don't Know 9	

		Declined 8 9 9	
HV11	Would you be willing to test for HIV?	Yes 1 No 2	**REFER**
HV12	What is your main source of information for STI/HIV/AIDS (circle all mentioned)	Peers 1 Media (Radio, TV, social media) 2 Mother 3 Father 4 Teachers 5 Others (Specify) 9 6	
THE FOLLOWING QUESTIONS ASKS ABOUT RIGHTS AND DECISION MAKING			
RD01	Now I would like us to talk about health rights? Do you know any health rights? (Right to protection from violence, right to food, right to access to information and health services e.g. contraception, STI treatments, right to make decisions and choices about one's self)	Yes, 1 No 2	Skip to RD04.
RD02	If yes, which rights do you know?	Right to protection from violence, 1 Right to access information 2 Right to access health services 3 Right to food 4 Others, specify 9 6	

RD03	What is your preferred source of knowledge and information about health rights?	Health facility 1 School 2 Mother 3 Father 4 Guardians 5 Uncles/aunties/relatives 6 Friends/Peers 7 TV 8 Radio 9 Others, (Specify) 96	
RD03	What are the reasons for your preferred source of information about health rights?	Privacy and confidentiality 1 Easy to access 2 Language 3 Others, (Specify) 96	
RD04	In your opinion do you agree that sexual health rights should be taught to adolescents?	Yes 1 No 2	
RD05	Have you ever been denied the opportunity to go to school because of being a girl or boy?	Yes 1 No 2	
RD06	Has anyone ever pressured to get married against your will?	Yes 1 No 2	SKIP TO RD08

RD07	When this happened, what was your relationship with the person who pressured you to get married? (circle all that apply)	Mother 1 Father 2 Guardian 3 Boy/girlfriend 4 Others, (Specify) 96	
The next questions ask about decision making (RD).			
RD08	Have you ever been involved in making decisions about your life (there's need to indicate real life scenarios)?	Yes 1 No 2	
RD09	Who often makes decisions and choices on your behalf?	Self 1 Mother 2 Father 3 Guardian 4 Peers/friends 5 Others, (Specify) 96	
RD10	Have you ever felt pressured to make a choice or do something against your will?	Yes 1 No 2 →	SKIP TO RD12
RD11	What was your relationship with the person at the time you felt pressured to make that decision or choice? (circle all that apply)	Mother 1 Father 2 Guardian 3 Peers/friends 4	

		Boy/girl friend 5 Others, (Specify) 96	
RD12	What type of decision would you like to make for yourself?	Career 1 Education 2 Health 3 Relationships (marriage, friends, sex) 4 HIV testing 5 Food 6 Others, (Specify) 96	
RD13	What kind of decisions have you made before for yourself?		
RD14	What would enable you to make the right decisions and choices?	Autonomy 1 Knowledge e.g. about human rights, available services etc 2 Parental guidance 3 Others, (Specify) 4 96	
RD15	Who do you often seek advice from about sexual and reproductive health decisions or any problems? (circle all that apply)	Mother 1 Father 2 Guardian 3 Peers/friends 4 Boy/girl friend 5 None 6 Others, (Specify) 96	SKIP TO BB01

RD16	Why do you seek advice about sexual and reproductive health decisions or any problems from the above mentioned person and not any other?		
THE NEXT QUESTIONS ASK ABOUT BULLYING (BB). Bullying is when 1 or more persons tease, threaten, spread rumors about, hit, shove, or hurt another student/adolescent over and over again. It is not bullying when 2 students of about the same strength or power argue or fight or tease each other in a friendly way.			
BB01	Have you ever been bullied?	Yes 1 No 2	SKIP TO VB01
BB02	If Yes, how were you bullied?	Tease 1 Shove/pushed 2 Hurt 3 Spread rumors about you 4 Others, (specify) 96	
BB03	Who bullied you?	Friend 1 Classmate/schoolmate 2 Stranger 3 Brother/sister 4 Others, (specify) 96	
BB04	Where were you bullied from?	School 1 Home 2	

		Community 3 Others, (Specify) 96	
BB05	Have you ever been **electronically** bullied? (Count being bullied through e-mail, social media, instant messaging, websites, or texting.)	Yes 1 No 2	
THE NEXT QUESTIONS ASK ABOUT VIOLENCE BEHAVIORS (VB)			
VB01	Do you feel safe (Yes=1, No=2)	At home 1 2	
		At School 1 2 N/A (Adolescent not in school)	
		In the community 1 2	
VB02	Have you ever carried a weapon, such as a spear, knife, or club for defense or harming others?	Yes 1 No 2	
VB03	Have you ever been in a physical fight with anyone at home or outside home?	Yes 1 No 2	SKIP TO VB05
VB04	Have you ever been in a physical fight in which you were hurt and had to be treated by a health	Yes 1 No 2	

	worker?		
VB05	Has someone ever done any of these things to you? (Yes=1, No=2)	Cane you 1 kick you 2 Twist or pull your hair 1 Try to choke/ strangle or burn you 2 Other (specify) 1 2 1 2	IF NO FOR ALL, SKIP TO VB 10
VB06	How old where you when one of these things first happened to you?		
VB07	How many times has either of these things happened to you?	Once 1 2 to 4 times 2 5 to 10 times 3 More than 10 times 4	
VB08	The last time any of these things happened to you, what was the person's relationship to you?	Girlfriend/Boyfriend 1 Mother 2 Father 3 Friend 4 Other, specify 96	
VB09	Did you try to seek help (help from a teacher, parent, health worker, police, and community leader) for any of these	Yes, specify 1 No, specify why 2	

	incidents?		
VERBAL/EMOTIONAL VIOLENCE			
VB10	Has anyone ever done any of these to you (Yes=1, No=2,)	Told you that you were not loved, or did not deserve to be loved 1 2 Said they wished you had never been born or were dead Ever ridiculed you or put you down, for example said that you were stupid or useless 1 2 1 2	IF NO FOR ALL, SKIP TO VB 14
VB11	How many times has someone done any of these things to you?	Once 1 2 to 4 times 2 5 to 10 times 3 More than 10 times 4	
VB12	How old were you when one of these things FIRST happened to you?		
VB13	The last time one of these things happened, what was your relationship with the person?	Girlfriend/Boyfriend 1 Mother 2 Father 3 Friend 4 Stranger 5 Other, specify 96	

SEXUAL VIOLENCE			
VB14	Some young people are forced to do **sexual acts** that they don't want to do, has someone ever forced you to do such acts? (Count such things as unwanted kissing, touching private parts such as breasts, or being physically forced to have sexual intercourse.	Yes 1 No 2	SKIP TO DP01
VB15	What is it that the person did?	Unwanted Kiss 1 Unwanted touch on private parts 2 Physically forced to have sexual intercourse 3 96 Others (Specify) 99 Refused to Answer	
VB16	What was your relationship to the person?	Girlfriend/Boyfriend 1 Mother 2 Father 3 Friend 4 Stranger 5 Relatives 6 Other, specify 96 Refused to answer 99	
VB17	Did you try to seek help after this experience?	Yes 1 No 2	SKIP TO V

			B 19
VB18	If Yes, where did you go to seek help?	Mother 1 Father 2 Guardian 3 Community member/ leader 4 Hospital/Clinic 5 Police Station 6 Helpline 7 Social Welfare 8 Legal Office 9 Other (Specify) 96	
VB19	If No, What was the main reason that prevented/ stopped you from seeking help?	Afraid Of Getting In Trouble 1 Embarrassed For Self/Family 2 Could Not Afford Services 3 Dependent On Perpetrator 4 Perpetrator Threatened Me 5 Did Not Think It Was A Problem 6 Felt It Was My Fault 7 Afraid Of Being Abandoned 8 Did Not Need/Want Services 9 Did not know where to seek services 10 Other (Specify):_____ 96 Don't Know/Declined 99	

		8	
The next questions ask about depression and feelings (DP) **How often have you been bothered by each of the following symptoms? please circle the option that best describes how you have been feeling**			
DP01	Feeling down, depressed, irritable, or hopeless?	Rarely 1 Occasionally 2 Frequently 3 Never 4	
DP02	Little interest or pleasure in doing things?	Rarely 1 Occasionally 2 Frequently 3 Never 4	
DP03	Trouble falling asleep, staying asleep, or sleeping too much?	Rarely 1 Occasionally 2 Frequently 3 Never 4	
DP04	Poor appetite, weight loss, or overeating?	Rarely 1 Occasionally 2 Frequently 3 Never 4	

DP05	Feeling tired, or having little energy?	Rarely 1 Occasionally 2 Frequently 3 Never 4	
DP06	Feeling bad about yourself – or feeling that you are a failure, or that you have let yourself or your family down?	Rarely 1 Occasionally 2 Frequently 3 Never 4	
DP07	Trouble concentrating on things like school work and reading?	Rarely 1 Occasionally 2 Frequently 3 Never 4	
DP08	Moving or speaking so slowly that other people could have noticed? Or the opposite – being so restless that you were moving around a lot more than usual?	Rarely 1 Occasionally 2 Frequently 3 Never 4	
DP09	Thoughts that you would be better off dead, or of hurting yourself in some way?	Rarely 1 Occasionally 2	

		Frequently 3 Never 4	
DP10	In the **PAST YEAR** have you felt depressed or sad most days, even if you felt okay sometimes?	Yes 1 No 2	
DP11	If you are experiencing any of the problems on this form, how difficult have these problems made it for you to do your work, take care of things at home or get along with other people?	Not difficult at all 1 Somewhat difficult 2 Very difficult 3 Extremely difficult 4	
DP12	Have you EVER, in your WHOLE LIFE, tried to kill yourself or made a suicide attempt?	Yes 1 No 2	

Thank you for participating