

**Suubi+Adherence: Family-Based Economic Empowerment for HIV  
Positive Youth in Southern Uganda  
Baseline Study Report**

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Nabigasa Health Center III	Kakuuto Health Center IV
Kalungu Health Center III	Lyantonde Moslem Health Center III
Kiwangala Health Center IV	

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## EXECUTIVE SUMMARY

This baseline report presents the pre-intervention survey data collected from 702 HIV positive children living in poverty-impacted districts of southwestern Uganda. The study, called *Suubi+Adherence* (meaning “hope” for adherence), is a five-year longitudinal randomized control trial. Specifically, the *Suubi+Adherence* study will follow 702 HIV positive children, ages 10-16, and assess the impact of a family-based economic empowerment intervention on adherence to Antiretroviral Therapy (ART). The pre-intervention data is presented in tables and text in the following pages and provides information regarding several aspects of participants’ lives including: demographics, family cohesion, psychosocial concerns, social support, education, savings/asset accumulation practices, physical health, poverty, medication adherence, sexual risk taking behavior, and drug and alcohol use. The survey utilized existing evidence-based clinical measures, as well as standardized, adapted and original scales and questions developed specifically for HIV- affected populations in Sub-Saharan Africa.

The following key findings summarize the highlights of the baseline survey.

- **School Enrollment and Academic Plans:** At baseline, 87.3% of participants were enrolled in school, 11.5% were not currently enrolled but had been at one time, and 1.1% of participants had never been enrolled. Students reported high rates of satisfaction with school (evidenced by scores on the adapted Multidimensional Student Life Satisfaction Survey) and 79% had a school near their home (less than 3 kilometers). For the 613 participants enrolled in school, the majority (89.7%) reported that they planned to attend secondary school, and most (67.6%) were confident in their ability to do so.
- **Household Composition:** The mean household size was 5.7 and participants reported relatively strong family cohesion, scoring an average of 31.76 on a 40 point scale. For those respondents with living parents, 77.6% reported their biological mother resides in the household whereas 47.9% stated that they live with a biological father.
- **Parental Loss and Related Effects:** Participants experienced paternal and maternal death at similar rates (45.2% and 45.3% respectively), and noted financial strain, a drop in academic performance, and emotional distress after the loss of either parent. Mothers were missed most for their caregiving attributes and fathers for their financial provision.
- **Caregiver-Child Communication:** Participants reported discomfort discussing social and health issues, especially those related to sexual health and drug/alcohol use, with their parents or caregivers. Just over 80% of respondents (80.6%) cited “never” as the frequency with which they discussed drugs or alcohol with their parents while 73.6% stated the same in regard to sex.
- **Physical Distress:** All participants had been prescribed an ART regimen with 77.1% taking 2-3 different medications per day. Participants reported moderate levels of physical distress, which caused periodic absences from school when feeling unwell or for medical appointments.



- **Saving and Use of Financial Institutions:** Seventy percent of participants reported they did not have money saved anywhere. For the 30% who reported some form of savings, only 9.8% reported using formal financial institutions (banks, and savings and credit cooperative). Most participants could not identify a financial institution in their communities. Nonetheless, participants placed a high value on saving for the future and reported being confident in their ability to save (if given the opportunity). Girls were more likely to consider saving money for education as “extremely important” (66.7%) when compared to boys (59.8%). Similarly, girls reported higher confidence in their ability to save for education and family use (68.2% and 61.9%) than boys (61.1% and 52.6%).
- **Poverty Indicators:** The majority of participants reported eating two meals per day (55.1%) followed by 28.2% indicating they ate three meals and 16.7% reporting eating one meal per day. Less than one quarter (23.2%) live in a home with electricity. Common assets include a house (92.0%), land (88.9%), cell phone (85.8%), and a banana garden (83.2%). The number of times participants ate meat or fish in past week varied from “none” (25.2%), “once” (25.8%), “twice” (22.5%), “three times” (15.4%), to “more than three times” (11.1%).
- **HIV Knowledge & Stigma:** Participants exhibited varied knowledge concerning HIV and AIDS. The majority were uncomfortable sharing their HIV status with those outside of their immediate family, with 67.8% indicating that they kept their status a secret ranging from “sometimes” to “all of the time”. Participant HIV status was discovered by others via word of mouth or by witnessing the participant take his/her medication. HIV and AIDS related stigma remains an issue in the study communities.
- **Medication Adherence (Support for):** Boys were more likely than girls not to have anyone assisting with their medication adherence (19.6% versus 9.8%). For those who did have social support for adherence, girls more frequently perceived the individual assisting them to “always” help (64.6%) compared to boys (45.1%). Girls also indicated a higher likelihood that their parent or caregiver would know if they missed medication.
- **Medication Adherence (Confidence in):** Girls more frequently reported full confidence in their ability to adhere. Discrepancies between male and female responses were most pronounced when participants were asked about the level of confidence to stick to their ART regimen even if it meant taking medication in front of people who were not aware of their HIV status. Only 31.4% of boys suggested full confidence in their ability to adhere in this situation compared to 45.8% of girls. Girls were also more likely than boys to self-report that they never missed medication (75.3% versus 64.1%). The higher levels of social support for girls may be associated with initial baseline measurements of medication adherence.
- **Psychosocial Functioning:** Participants were given three evidence-based psychosocial measures: an adapted Children’s Depression Inventory (CDI), an adapted Tennessee Self Concept Scale (TSCS), and the Beck’s Hopelessness Scale. All mean responses for the adapted CDI fell below the threshold for mild depression. Participants scored a total of 67.32 out of 85 on the TSCS, falling within the average range for perceptions of self-worth, and a 5.66 on the Beck’s Hopelessness Scale, indicating “mild hopelessness”.

- **Sexual Risk Taking Behaviors:** Only 4.7% (n=33) of participants reported that they had sexual intercourse. Given the taboo on discussing sexuality, this number is likely to be underreported. Of those who reported having sexual intercourse and provided feedback on methods of protection used (n=31), over half (64.5%) indicated methods insufficient to protect against HIV transmission.

In conclusion, our pre-intervention survey data indicate that although very few children in the sample population are saving money and even fewer are aware of formal financial institutions within their communities, most of them express confidence in their ability to save. Self-reported adherence to ART is high among the sample population, though adherence data will be gathered and triangulated through other methods. In the *Suubi+Adherence* longitudinal study, follow-up will occur annually to assess participant change across a variety of factors, including finances, psycho-social functioning, health, and education.

AIDS	Acquired Immunodeficiency Syndrome
ART	Antiretroviral Therapy
B - SOC	Bolstered Standard of Care
CDA	Child Development Account
HIV	Human Immunodeficiency Virus
IGA	Income Generating Activity
MSLSS	Multidimensional Student Life Satisfaction Scale
NICHD	National Institute of Child and Human Development
PEDSQL	Pediatric Quality of Life Inventory
SSA	Sub-Saharan Africa

## **1. THE SUUBI+ADHERENCE STUDY: INTRODUCTION AND RATIONALE**

Great strides have been made in the global response to treat and prevent the spread of HIV and AIDS. Particularly with advances in antiretroviral therapy (ART), patients who are being treated are able to live longer, healthier lives (AIDSinfo, 2014) and are considerably less likely to spread the virus. However, the success of ART depends greatly on a patient's ability to access treatment and strictly adhere to the required drug regimen. Patients must take the correct dosage of medication, at the same time every day in order for treatment to be effective (Peltzer & Pengpid, 2013). Irregular medication increases a patient's risk of developing drug resistant strains of the virus as well as spreading the virus to others (CDC, 2013).

Many barriers exist which may interfere with strict adherence including, unpleasant side effects of medication, mental distress, and lack of information about the disease. Poverty is also considered a significant factor in contracting HIV as well as a barrier to ART adherence once infected (Marais et al., 2008). Lower levels of education and literacy generally result in lesser access to information about HIV, increasing the risk that the disease will spread and creating an environment prone to stigma and social exclusion for those affected. Additionally, the poor face challenges in accessing treatment due to lack of childcare or medical resources in their communities and transportation costs (Marais et al, 2008). Moreover, household earnings often decline because HIV positive family members in poverty-impacted communities are normally too ill to work consistently. For families with some form of income and savings, greater portions of the family's earnings are often reserved for medication and medical visits (Piot, Greener, & Russell, 2007).

Studies from Uganda, and much of Sub-Saharan Africa (SSA), indicate that one group disproportionately affected by HIV are poor or economically vulnerable children (Biadgilign, Deribew, Amberbir, & Deribe, 2009; Haberer, Kiwanuka Nansera, Wilson & Bangsberg, 2010; Li et al., 2010; Nachega et al., 2009; Polisset, Ametonou, Arrive, Aho, & Perez, 2009; Sutcliffe, van Dijk, Bolton, Persuad, & Moss, 2008). Yet, for this population, adherence to treatment regimens – defined as the extent to which a person's behavior (including taking ART, attending healthcare follow-up appointments, undergoing blood tests for viral load assessments, and following a prescribed diet) conforms with healthcare provider recommendations – may require a level of economic stability that many youth do not experience (Emenyonu, et al. 2010; Hardon, et al. 2007 Weiser, et al. 2003). Commonly cited reasons for non-adherence reflect both economic and social concerns, such as lack of finances to purchase ARV medicines (Gusdal et al., 2009; Ramadhani et al., 2007), transportation to clinic appointments (Emenyonu et al., 2010; Mukherjee, Ivers, Leandre, Farmer, & Behforouz, 2006; Tuller et al., 2010), and food insecurity (Hardon et al., 2007; Weiser et al., 2010). In short, poor children encounter greater challenges to ART adherence compared to children who are more economically stable (Au et al., 2006; Tuller et al., 2010). Yet, to date, no adherence interventions have focused on the underlying economic drivers, which might help explain why results of adherence interventions with HIV+ adolescents and adults living in poverty have had small to moderate effects at best (Haberer & Mellins, 2009; Simoni, Amico, Pearson, & Malow, 2008).

Studies have documented the strong relationship between high ART adherence and better virologic, immunologic, and clinical outcomes (Bangsberg et al., 2001; Gifford et

al., 2000; Hogg et al., 2002; Hogg et al., 2000; Johnson et al., 2003; Paterson, et al., 2000; Wood et al., 2003). Yet recent data from SSA indicates that adherence may be one of the biggest challenges and greatest barriers to realizing the full benefits of ART (Bangsberg et al., 2001; Gill, Hamer, Simon, Thea, & Sabin, 2005; Hogg et al., 2002; Hogg, Yip, Chan, O'Shaughnessy, & Montaner, 2000; Wood et al., 2003). Poor adherence leads to inadequate viral suppression, leading to clinical and immunological decline and development of drug resistant viral strains (Hogg et al., 2002; Johnson et al., 2003; Vanhove et al., 1996) posing a threat to public health (Mills et al., 2006; Cambiano et al., 2010; Blower, 2001).

Uganda, one of the countries hardest hit with HIV in SSA, reports unprecedented numbers of perinatally HIV-infected children. Slightly over 190,000 children (ages 0-17) are living with HIV in Uganda (UNICEF, 2015) with 9,629 new infections diagnosed in 2013 (Gov't of Uganda, 2014). As ART has become more readily available in several sub-Saharan African countries, including Uganda (free ARV roll-out in Uganda began in 2004), the consequences for children have gradually changed with a decrease in mortality and increased likelihood that a growing number of surviving youth will now cope with HIV as a chronic, highly stigmatized, and transmittable illness (Domek, 2006; Malee et al., 2011; Mellins et al., 2011).

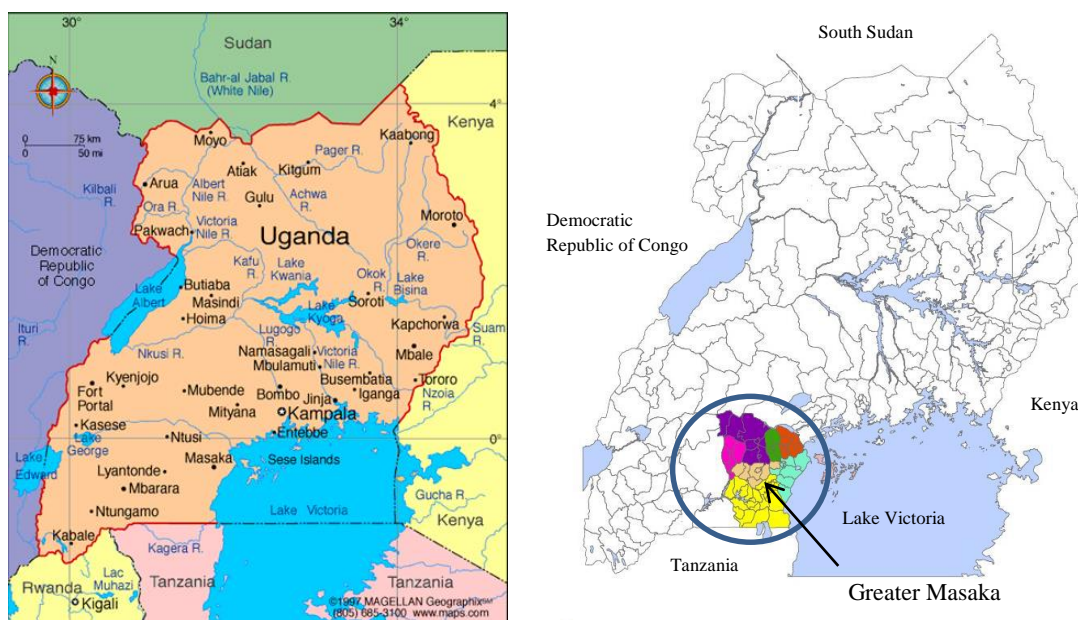
A recent study by Tuller and colleagues (2010) in western Uganda found that provision of free ART without addressing the financial barriers (including the cost of transportation to clinics to pick-up monthly refills) does not sufficiently address the problem of treatment interruptions (Tuller et al., 2010). The cost of transportation relative to income can be substantial, and often competes with other essential expenses. Individuals who missed doses cited problems finding transportation money as a key reason for not being able to maintain their regimen, explaining that they were unable to afford to travel to the clinic before their supply of medications ran out. Even for those not yet on ART, anxiety over the cost of transportation caused them to question whether they would be able to adhere to their medication regimens once they initiated treatment (Tuller et al., 2010). Indeed, studies in resource constrained settings point to HIV-positive patients sacrificing healthcare, including adherence to treatment, and other basic needs, including food, clothing, and school fees for children (Weiser et al., 2003; Hardon et al., 2007; Gusdal et al., 2009; Ramadhani et al., 2007) due to financial constraints.

The Suubi+Adherence study will examine a family-based economic empowerment intervention that aims to improve medication adherence for HIV-positive youth in rural Southern Uganda. Specifically, the Suubi+Adherence study will examine the ways in which economic stability may impact adherence to ART; and several other outcomes including sexual-risk taking behavior, mental health, future aspirations, and self-efficacy. The study is grounded in asset theory (Sherraden, 1991)—which posits important developmental, psychological and social benefits for individuals and households as a result of owning assets; and informed by a successful economic intervention previously tested with AIDS-affected youth in Southern Uganda, as well as adherence studies in South Africa.

## Methods

Suubi+Adherence is a five-year longitudinal randomized experimental study. Participants were drawn from clinics/health centers within the greater Masaka region, an area heavily affected by HIV and AIDS. The greater Masaka region is comprised of six political districts: Rakai, Masaka, Lwengo, Kalungu, Lyantonde and Bukomansimbi. For a clinic/health care center to be included as part of the study, it had to be providing ART. Using this criteria, 40 clinics were recruited and after one disqualification, 39 remained in the study. These are the clinics from which the study participants were recruited.

**Figures 1.1 and 1.2 Map of Uganda, Map of Greater Masaka**

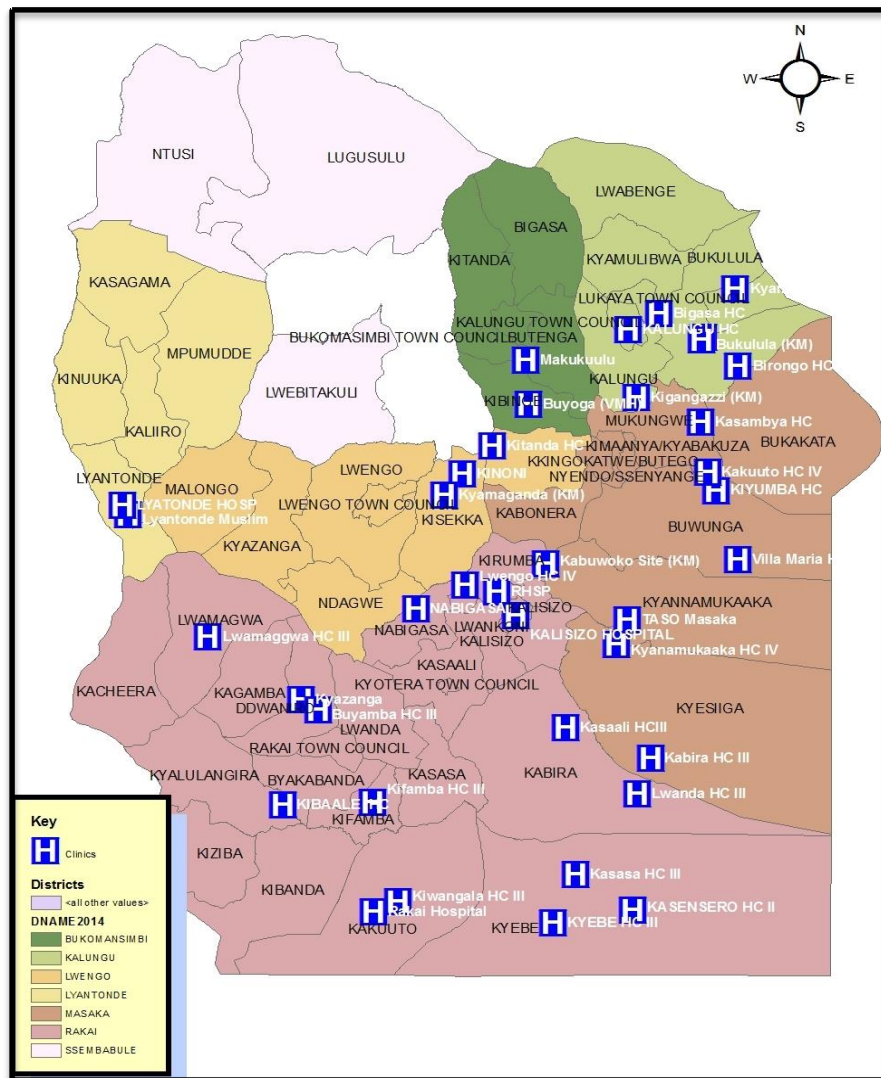


For a participant to be included in the study, she/he had to meet the following inclusion criteria: 1) an adolescent youth ages 10-16; 2) HIV-positive and aware of his/her status (previously tested for HIV and confirmed by medical report); 3) prescribed antiretroviral therapy (ART); 4) registered at one of the 39 clinics/health centers for follow-up care and drug refills; and 5) living within families (not institutions). Using that criteria, 702 study participants were recruited. For additional details, see consort diagram (Fig. 1.3).

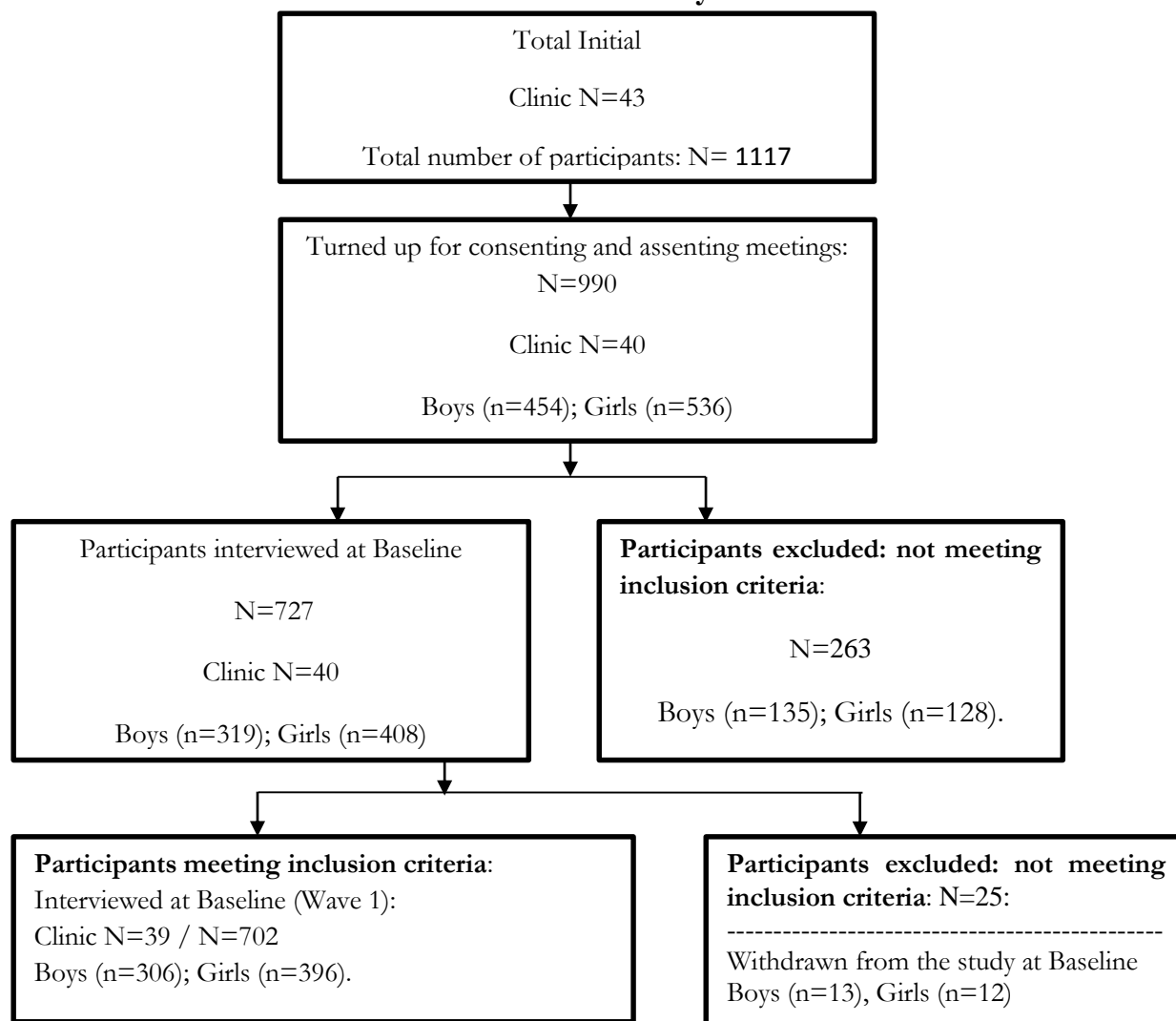
A list of all eligible families was created from medical records by health clinic staff. At patient appointments, medical providers presented the project to adult caregivers of eligible children. If caregivers were interested, on-site research staff obtained written consent for child participation. Children provided written assent to participate in the study. If caregivers were not present at the medical appointment, a community health worker from the clinic conducted outreach within the community to locate the parent/caregiver and present the project. For families with multiple children, all those who were eligible were recruited, provided they met the inclusion criteria.

Following the consent and assent process, participants were interviewed by trained staff. All the interviews were conducted in Luganda, the commonly spoken language in the study region. The interview instrument covered a range of topics, including: family cohesion, community satisfaction and resources, experience at school, psychosocial concerns, physical health, mental health, medication adherence, and drug and sexual risk behavior. The survey measure used in the interview was adapted from previous studies in the region (Ssewamala et al., 2009; Ssewamala & Ismayilova, 2009; Ssewamala et al., 2010a, 2010b, 2010c, 2010d; Ssewamala et al., 2012). The tool is a combination of questions developed specifically for HIV and AIDS affected youth, as well as pre-established and clinically proven assessment measures. In addition to the baseline measurements, the tool will be employed at each of the four following assessment points - 12, 24, 36, and 48 months.

### Figure 1.3 Map of Health Clinics



**Figure 1.4**  
**Baseline Consort Flow Chart: Adherence Study**



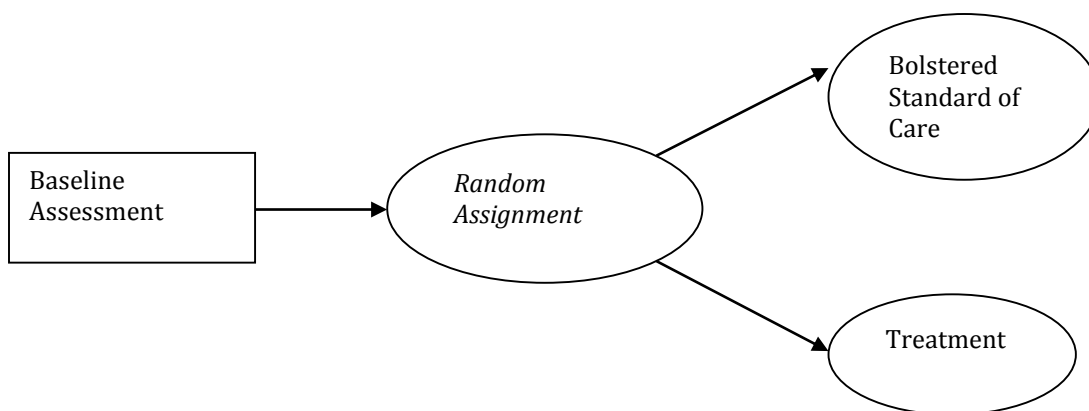
Data on medication adherence was and will continue to be collected via self-report through the survey instrument and triangulated through pharmacy refill records, CD4 counts, pill counts and the “Wisepill” electronic device which uses cell phone technology to record data.<sup>1</sup>

<sup>1</sup> The Wisepill dispenser holds approximately 30 large pills or 60 small pills in a two-compartment inner container and is powered by a 1,100 mA lithium polymer rechargeable battery. Every time the dispenser is opened, a cellular signal is sent and recorded in real-time on a web-based server, which is housed in Cape Town, South Africa. The data is then immediately accessible to research staff via a secure Internet interface. Each Wisepill dispenser contains a SIM card and data are transmitted primarily by general packet radio service (GPRS) to a web-based server. Data transfer may also occur via short message service (SMS). In addition to device openings, the Wisepill signal reports the remaining battery power for the device, airtime on the SIM card, and strength of the signal. The Wisepill battery life is approximately three months, assuming the dispenser is opened once per day, and 1.5 months if opened twice per day.



Following the baseline interviews, participants were randomly assigned (at the health clinic level) to one of two study conditions (Suubi+Adherence vs. Bolstered Standard of Care (B-SOC)). Figure 1.4 illustrates the research design. All participants in the study (n=702) will receive B-SOC which includes supporting and training clinic staff to disseminate health and adherence information developed by the Health Ministry of Uganda and is supplemented with evidence-informed adherence support materials designed and tested in Sub-Saharan Africa (SSA).

**Figure 1.5 Research Methods Diagram**



### **Intervention**

Participants in the Treatment condition will receive B-SOC plus a 2-year Suubi+Adherence economic intervention. The intervention includes three components:

- 1) **Child Development Accounts (CDA):** The central component of the Suubi+Adherence intervention is a savings account for each participant used for long-term saving goals. The study will provide the initial deposit for each participant's account and will match savings 1:1 each month. The accounts will be housed at local financial institutions in the participants' communities and will be retained after the completion of the study. Parents and relatives of the child will be encouraged to deposit money in the account to save for secondary education or a family business.
- 2) **Microenterprise workshop:** Each participant and his/her family will be invited to attend a microfinance and financial management workshop, which will offer advice on starting a family income generating activity (IGA).
- 3) **Mentorship:** Participants will be given the opportunity to attend 12 educational sessions covering a wide range of issues including but not limited to financial planning, business development, saving, setting short and long term goals, and avoiding risk-taking behaviors. Participants will also be paired with a mentor to connect with for the duration of the intervention period.

## **2. DEMOGRAPHICS**

A total of 702 adolescents were enrolled in the Suubi+Adherence study: 44%

(n=306) male and 56% female (n=396). Participants ranged in age from 10 to 16 with the mean age being 12.4 and the median age being 12. All participants are living with HIV and are aware of their status. Most participants were enrolled in school, with only 11.5% (n=81) reporting that they were not enrolled, and 1.1% (n=8) reporting they had never been enrolled. Lack of enrollment or attendance in school is not uncommon for children living with HIV as some parents choose to keep children away from peers for fear of social shaming or getting stigmatized.

Most participants reported belonging to an organized religion and over 80% reported attending church/ mosque at least once a week. The majority identified as Catholic (63%), followed by Muslim (15%), and Protestant (13%). Table 2.1 below lists the demographic characteristics, religious identification, and household characteristics of the study population.

**Table 2.1. Demographic Characteristics of Study Sample (N=702)**

Variable	Male (N= 306) <i>n (% within gender)</i>	Female (N=396) <i>n (% within gender)</i>	Total (N=702) <i>n (% within total)</i>
<b>Age (Mean)</b>			
10	83 (27.1)	100 (25.3)	183 (26.1)
11	39 (12.7)	43 (10.9)	82 (11.7)
12	43 (14.1)	57 (14.4)	100 (14.2)
13	52 (17.0)	61 (15.4)	113 (16.1)
14	49 (16.0)	58 (14.6)	107 (15.2)
15	19 (6.2)	33 (8.3)	52 (7.4)
16	21 (6.9)	44 (11.1)	65 (9.3)
Missing	0 (0.0)	0 (0.0)	0 (0.0)
<b>Education</b>			
Enrolled	267 (87.3)	346 (87.4)	613 (87.3)
Not enrolled	35 (11.4)	46 (11.6)	81 (11.5)
Never enrolled	4 (1.3)	4 (1.0)	8 (1.1)
Missing	0 (0.0)	0 (0.0)	0 (0.0)
<b>Religion</b>			
Catholic	197 (64.4)	245 (61.9)	442 (63.0)
Protestant	38 (12.4)	53 (13.4)	91 (13.0)
Muslim	47 (15.4)	58 (14.6)	105 (15.0)
Born again/ Saved	19 (6.2)	39 (9.8)	58 (8.3)
Not Religious	2 (0.7)	0 (0.0)	2 (0.3)
Other	3 (1.0)	1 (0.3)	4 (0.6)
Missing	0 (0.0)	0 (0.0)	0 (0.0)

**Table 2.1. Continued - Demographic Characteristics of Study Sample (N=702)**

Variable	Male	Female	Total
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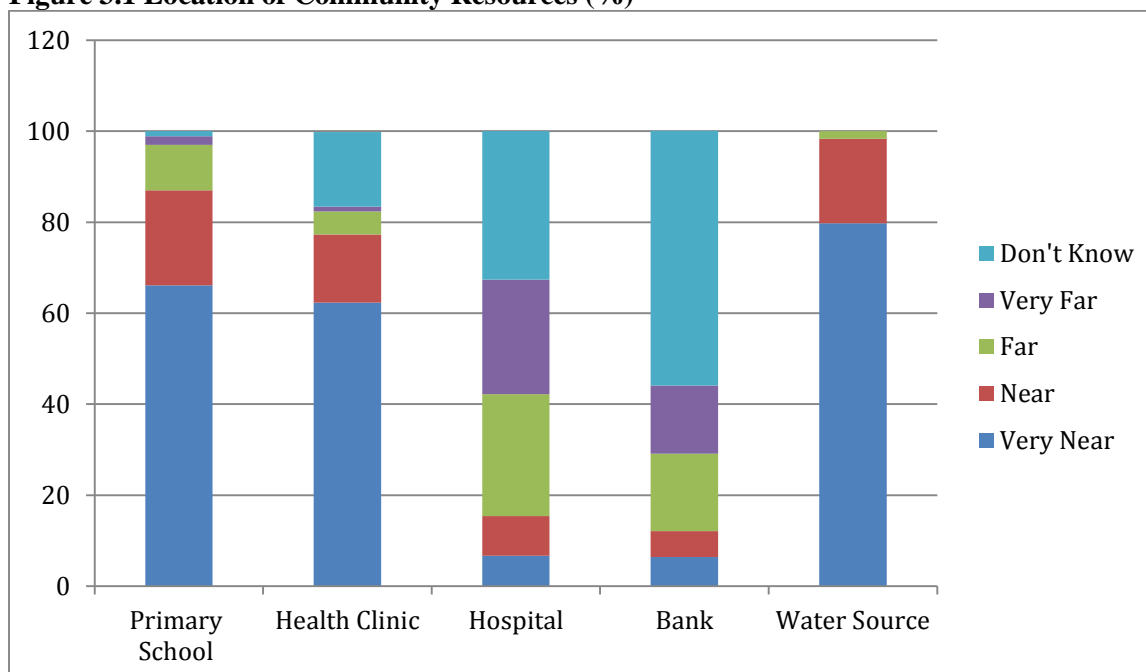
	(N=306) <i>n (% within gender)</i>	(N=396) <i>n (% within gender)</i>	(N=702) <i>n (% within total)</i>
<b>Number of times participant goes to church/ Mosque</b>			
Almost every week	242 (79.1)	334 (84.3)	576 (82.1)
Less than once a week	49 (16.0)	51 (12.9)	100 (14.2)
Just on holidays	7 (2.3)	9 (2.3)	16 (2.3)
Almost never	3 (1.0)	2 (0.5)	5 (0.7)
Never	5 (1.6)	0 (0.0)	5 (0.7)
Missing	0 (0.0)	0 (0.0)	0 (0.0)
<b>No. of People in Household</b>			
2-3	64 (19.9)	75 (18.9)	139 (19.8)
4-5	92 (30.1)	130 (32.8)	222 (31.6)
6-7	85 (17.8)	102 (25.7)	187 (26.6)
8-9	39 (12.7)	59 (14.9)	98 (14.0)
10+	26 (8.4)	30 (7.5)	56 (8.0)
Missing	0 (0.0)	0 (0.0)	0 (0.0)
<b>No. of Children in Household (other than respondent)</b>			
0	62 (20.3)	66 (16.7)	128 (18.2)
1-2	123 (40.2)	165 (41.7)	288 (41.0)
3-4	85 (27.8)	106 (26.7)	191 (27.2)
5-6	31 (10.1)	48 (12.1)	79 (11.3)
7-8	4 (1.0)	7 (1.8)	11 (1.5)
9+	1 (0.3)	4 (1.1)	5 (0.7)
Missing	0 (0.0)	0 (0.0)	0 (0.0)

Among the study population, the mean household size was 5.7 people. The highest number family members reported in one home was 18 and the lowest was 2. An average of 2.3 children resided in each household. Over 80% of the participants reported that all children in the home attended school. For those children that were not attending school the most common reasons cited were: “young for school”, “refused schooling”, “monetary reasons” and “I don’t know.” Nine were the mean number of years participants had reported living at their current residence.

### 3. COMMUNITY BACKGROUND

As the Suubi+Adherence intervention will be operating through pre-existing community institutions, it was necessary to assess the accessibility of key community resources. Table 3.1 below shows how far participants lived from several community institutions. Over 75% of the participants reported living either “very near” or “near” to a health clinic. Conversely, knowledge of formal financial institutions was lacking, with over 50% of participants unable to identify a financial institution in their community and an additional 32% reporting that they lived “very far” or “far” from a bank.

**Figure 3.1 Location of Community Resources (%)**



In addition to resources within communities, respondents were asked questions to determine their level of satisfaction with their home and village. Respondents were given several statements about their community and asked to rate them on a five point Likert scale with the following response options: “Always-5”; “Most of the time-4”; “About half the time-3”; “Sometimes-2”; and “Never-1.” Higher scores indicated greater levels of satisfaction. The theoretical range was 8-40 with 40 being the highest cumulative score possible. Statements that had an inverse relationship with the scale were reverse-coded. Table 3.2 below shows these responses. See Table A.1 in Appendix to see individual responses to each of the community satisfaction statements.

**Table 3.2 Community Satisfaction**

	Mean (SD)
I like where I live.	4.02 (1.31)
I wish I lived in a different house.†	3.99 (1.43)
I wish I lived in another village.†	3.96 (1.38)
I like my village.	3.83 (1.40)
I like my neighbors	3.91 (1.33)
This village is filled with not nice people.†	3.67 (1.41)
My family's house is nice.	3.51 (1.48)
There are a lot of fun things to do where I live.	3.30 (1.51)
<b>Total</b>	<b>30.17 (5.86)</b>
	<b>Range 13-40</b>

† Item has been reverse-coded so that higher scores reflect higher satisfaction.

Overall community satisfaction is relatively high, particularly when it pertains to satisfaction with the participant's village and house. The last two statements have slightly lower ratings, which may refer to the lack of material possessions and resources within the communities rather than general satisfaction.

## 4. PSYCHOSOCIAL SUPPORT

Adolescence is a particularly vulnerable stage of development that may be further complicated by HIV if children are not provided with the necessary support systems. Adolescence is marked by the onset of physical and emotional maturation accompanied by the challenges of adapting to social, emotional, and cognitive changes (Hamburg, 1990; Sachs & Sachs, 2004; Kagotho & Ssewamala, in press). During this developmental process, support from parents or caregivers can have a positive effect with research indicating an association between higher levels of psychosocial support from caregivers and greater medication adherence for HIV positive children (Mellins, et al., 2004).

In this section, respondents are asked questions about their relationship with their biological parents. For those participants whose parent had died (Father / N=317) (Mother / N=318) questions pertained to how the loss affected the financial, material and emotional security of the participant.

### RELATIONSHIP WITH BIOLOGICAL PARENTS

Over half of the participants, 53.6% (N=376) and 54.1% (N=380) reported that their father or mother was still living, respectively. Table 4.1 provides details on participants' relationships with their biological fathers and mothers. Of those participants with a living father, just under half, 47.9%, reported that they currently resided with him. For respondents with a living mother, 77.6% reported residing with her.

**Table 4.1. Relationship with Parents (N=702)**

*Suubi+Adherence  
Baseline Report*

Variable	Father <i>n</i> (% within gender)	Mother <i>n</i> (% within gender)
<b>Biological Parent Living</b>		
Yes	376 (53.6)	380 (54.1)
No	317 (45.2)	318 (45.3)
I Don't Know	9 (1.3)	4 (0.6)
Missing	0 (0.0)	0 (0.0)
<b>If Not Living With Biological Parent, Does Child Visit</b>	N= 196	N= 85
Yes	116 (59.2)	57 (67.1)
No	80 (40.8)	28 (32.9)
Missing	0 (0.0)	0 (0.0)
<b>How Often Does Child Visit Biological Parent</b>	N=116	N=57
Once per week	18 (15.5)	13 (22.8)
Once per month	33 (28.4)	13 (22.8)
Once per year	40 (34.5)	21 (36.8)
Other	25 (21.6)	10 (17.5)
Missing	0 (0.0)	0 (0.0)
<b>Reasons Why Does Not Visit Biological Parent</b>	N=80	N=28
No transport money	17 (21.2)	5 (17.9)
Parent or guardian doesn't allow it	7 (8.8)	4 (14.3)
It's too far	17 (21.2)	5 (17.9)
Don't know where he/she is	13 (16.3)	7 (25.0)
Don't know	1 (1.2)	0 (0.0)
Other	25 (31.3)	7 (25.0)
Missing	0 (0.0)	0 (0.0)

## PARENTAL DEATH

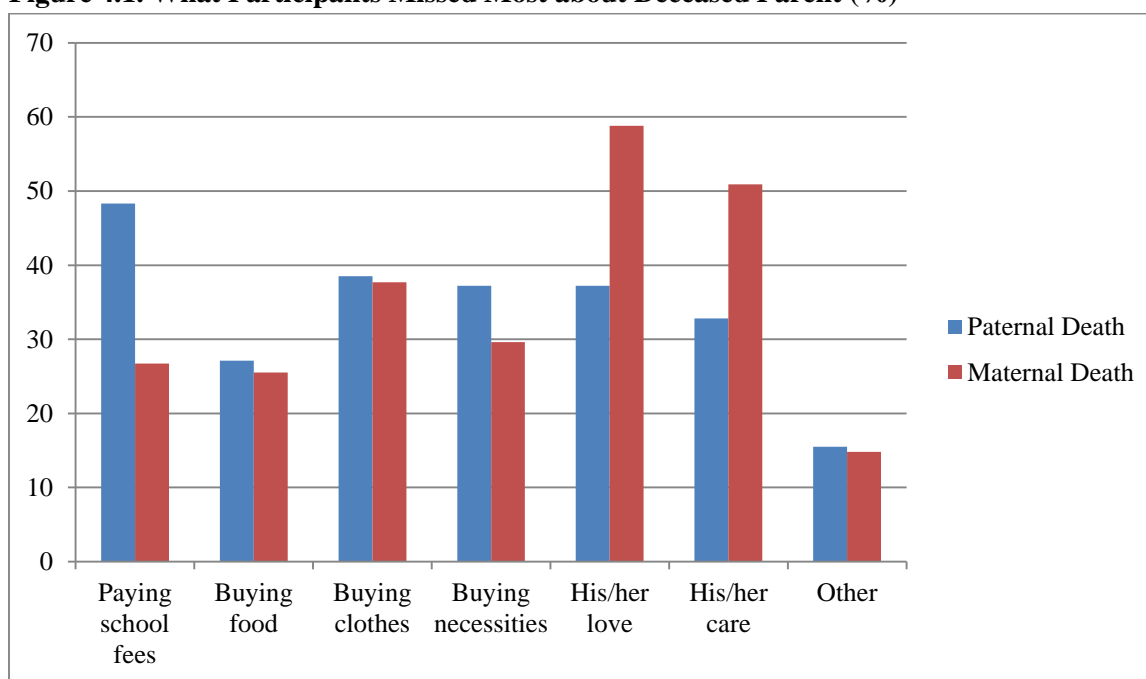
Of the participants in Suubi+Adherence, 317 reported that their father was no longer living and 318 reported their mother had died. Participants were asked questions about the death of their parent: 1) What in your life has changed since the death of your parent; 2) How has the loss of your parent affected the way you feel about life; and 3) What do you miss most about your parent? Respondents were allowed to select more than one answer. Responses included in the questionnaire were informed by previous studies in the region with children affected by HIV and AIDS. All responses are presented in Table 4.2 and Figure 4.1 below. Additional data is provided in Table A.2 in Appendix A.

**Table 4.2 Scholastic and Economic Changes After Parental Death**

Variable	Paternal Death N=317 n (%)	Maternal Death N=318 n (%)
Decline in school attendance	109 (34.4)	112 (35.2)
Worse grades	130 (43.8)	142 (44.7)
More chores	111 (35.0)	124 (39.0)
Taking care of smaller children	120 (37.9)	112 (35.2)
Taking care of parents	161 (50.8)	142 (44.7)
Less food/money as a family	191 (60.3)	167 (52.5)
Less food/clothes as an individual	187 (59.0)	187 (58.8)
Late start to school	134 (42.3)	135 (41.5)
No shelter	34 (10.7)	50 (15.8)
No Change	52 (16.4)	59 (18.6)
Other	1 (0.3)	1 (0.3)
Missing	0 (0.0)	0 (0.0)

*\*Respondents able to select more than one answer*

**Figure 4.1. What Participants Missed Most about Deceased Parent (%)**



The data provided above suggests that economic hardship is the most significant change in the life of a child resulting from the death of a parent followed by lowered school performance and greater responsibilities in the home. While response rates between the death of a father and the death of a mother are generally consistent, some limited discrepancies exist with financial hardship for the household resulting more commonly after the death of a father and caregiving responsibilities becoming more prominent after the death of a mother.

Participants were also asked about their emotional response to the death of a parent. Respondents identified multiple emotions resulting from their loss, commonly noting

feelings of sorrow, worry, and isolation along with relief and a determination to do well. Similar to the first questions, response data is generally consistent whether it was the mother or father who died.

The data in Figure 4.1 demonstrates a more marked divergence in respondents' feelings towards the loss of a mother as compared to the loss of a father. Participants associate paternal loss with financial struggle, indicating the paying of school fees and purchasing of food and clothing as the top three things they missed most about their father. Conversely, "love" and "care" were noted by 58.8% and 50.9% of respondents respectively as what was missed most after maternal loss as compared to 37.2% and 32.8% after the death of a father. These preliminary findings are consistent with social norms and gender roles in Uganda.

## 5. FAMILY COHESION

Family cohesion refers to the level of operational connectedness among individuals who identify as part of the same family unit. Higher levels of family cohesion may contribute to an individual's overall resilience (Betancourt, Meyers-Ohki, Stulac, et al., 2011). Routine interactions between family members were explored with participants asked to respond to statements using a Likert scale. Response options included: "Always-5"; "Most of the time-4"; "About half of the time-3"; "Sometimes-2"; and "Never-1." Below, Table 5.1 shows the mean score for each family cohesion item as well as the total score for the scale. The theoretical range for this scale is 8-40 with a reliability coefficient of .794. Higher scores indicate greater levels of family cohesion. Table 5.1 below presents the mean score for each item and a total mean score for the scale. For individual answers to the Family Cohesion section of the survey refer to Table A.3 in Appendix A.

**Table 5.1 Family Cohesion**

	<i>Mean (SD)</i>
Family members ask each other for help before asking non-family members.	3.81(1.42)
Family members like to spend free time with each other.	3.9 (1.34)
Family members feel close to each other.	3.93 (1.32)
Child is available when other family members want to talk.	3.98 (1.33)
Child listens to what other family members have to say.	4.06 (1.30)
Family does things together.	3.93 (1.33)
Parents take time to listen to child.	4.04 (1.28)
If child has a problem, parents offer help.	4.10 (1.21)
<b>Total</b>	<b>31.76 (6.74)</b>
	<b>Range 12-40</b>

Table 5.1 shows that family cohesion for this population tends to be relatively strong. However, males demonstrated lower scores on all cohesion statements as compared with their female counterparts. Variance in response between males and females ranged from 3% on the statement regarding spending free time with one another (46.7% of males and 49.7% of females indicated "always") to 20.6% on the statement that the child is available when other family members want to talk (41.8% for males and 62.4% for females).

In addition to operational connectedness, participant feelings about their



relationship with their caregivers/parents were explored. A series of statements on communication, discipline, and support were adapted from the 73 item Parent Child Relationship Inventory (PCRI) and modified to 18 items directed to the child rather than the parent as originally designed. The modified scale yielded a strong reliability coefficient (.794 Cronbach's Alpha). Participants rated each statement using a 5 point Likert scale. Response options again included: "Always-5"; "Most of the time-4"; "About half of the time-3"; "Sometimes-2"; and "Never-1." Higher scores indicated desired parent-child relationships. Reverse coding was used for those items in which the statement had an inverse relationship with the scale. For questions pertaining to education, mean scores were calculated using only responses from participants currently enrolled in school. For individual responses to the Caregiver Communication scale refer to Table A.5 in Appendix.

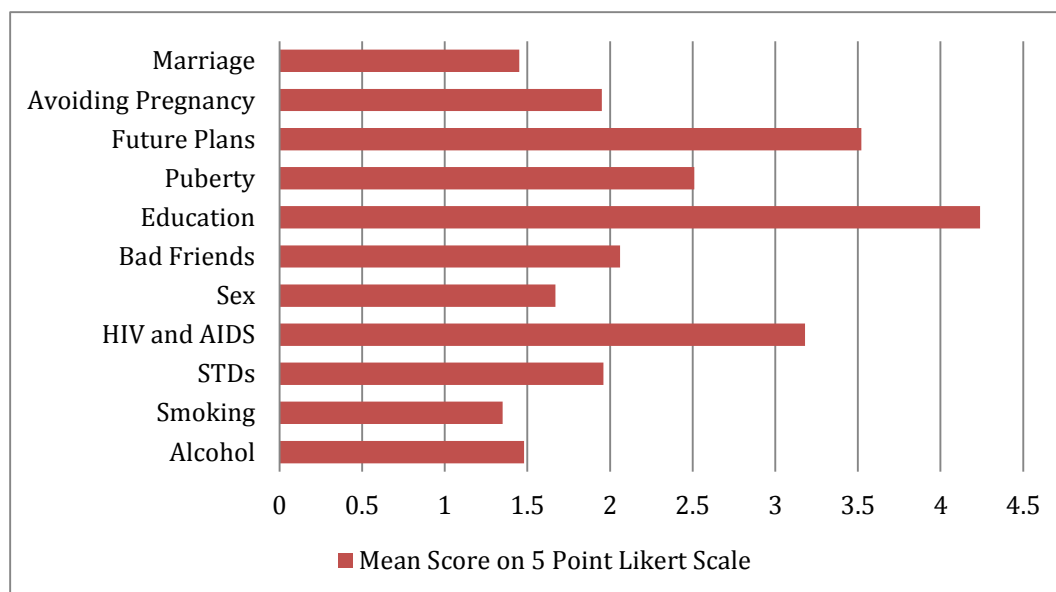
The data provided on communication between the child and his/her caregiver showed highest mean scores for those statements related to academic encouragement followed by availability and willingness of parents to talk with the child, whether or not a problem exists. Lowest mean scores occurred on those statements pertaining to children challenging a parent or thinking independently.

Females were more likely to respond "always" on statements related to parental availability and time spent talking with a parent (60.4% and 52.8%) when compared to males (41.8% and 38.9%). Conversely, females were also more likely to respond "always" on statements that suggest a diminished level of autonomy, such as the child asked to not argue or question an adult (42.9% and 30.3%) when compared with males (31.7% and 19.0%). The greater level of autonomy afforded to male children is also evident by how males responded to the statement that "parents let children make their own plans..." with 31.7% responding "always" compared with 23.3% of females indicating the same.

## DISCUSSION OF SENSITIVE TOPICS AND RISK BEHAVIORS

Participants were presented with several issues related to sex, drug use, and future planning, and asked how often they discussed these topics with their parents/ caregivers. Responses included "Always-5"; "Most of the time-4"; "About half of the time-3"; "Sometimes-2"; and "Never-1." This series of questions, as with the series below on level of comfort discussing the same topics, were adapted from the Krauss Interview. For the purposes of this study, the scale was modified to 11 items in two formats, with a reliability coefficient of .801 (Cronbach's Alpha). For the question pertaining to education, the mean score was calculated using only responses from participants currently enrolled in school. Higher scores in this section indicate that the topic was discussed more frequently in the home. Figure 5.1 below shows the mean response for each topic. For individual responses to these statements, refer to Table A.6 in Appendix.

**Figure 5.1. Frequency of Discussion on Sensitive Topics and Risk Behaviors with Parents/Caregivers**

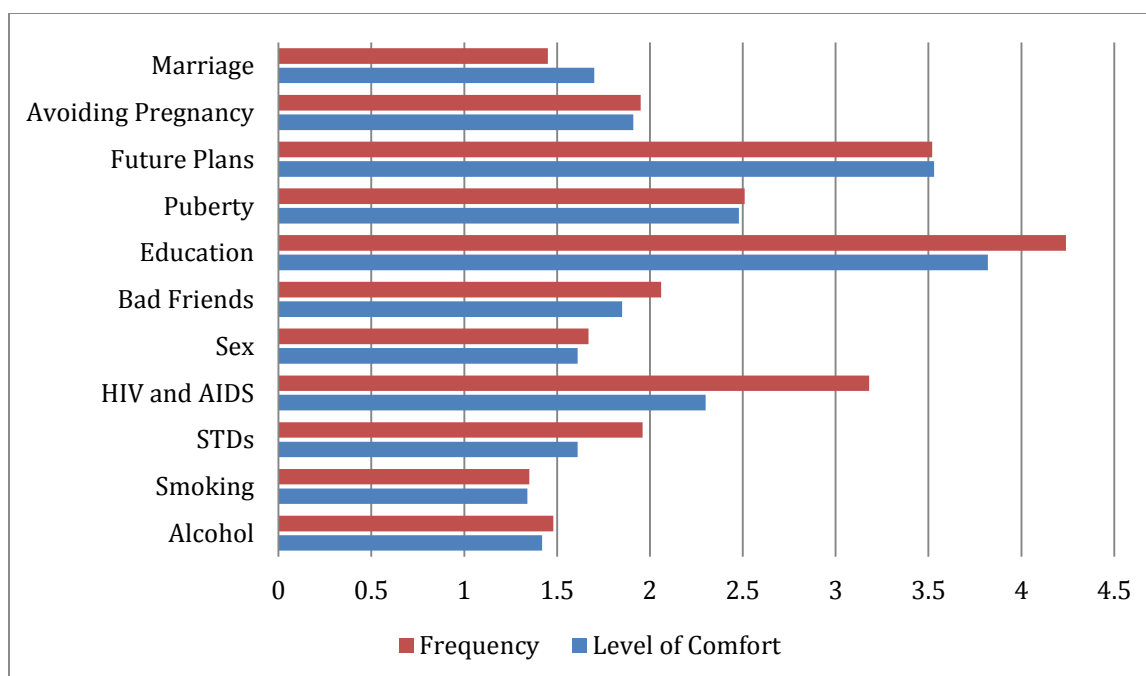


The mean scores for the topics illustrated in Figure 5.1 vary widely. Alcohol/Drinking and Cigarette Smoking have two of the lowest scores, indicating that these topics were rarely discussed in the home. With the exception of HIV, topics pertaining to sex were also rarely discussed, which is consistent with Ugandan cultural norms. Respondents did indicate speaking more frequently with their parents/caregivers about HIV though this may be directly linked to their medication regimen as opposed to broader dialogue.

Other topics that were more commonly discussed included education and future plans. This is a population that has reported great value and satisfaction in their education and experience at school, which may be reflective of why it is a common topic of conversation at home. The mean score for “education” was 4.24, and 3.52 for “what child will do to earn a living.” Though marriage falls in the category of future plans, participant responses show that this topic was rarely discussed in the home. Its mean score was 1.45.

In addition to frequency of discussion, participants were asked about their level of comfort in discussing sensitive topics and risk behaviors with their parents/caregivers using the same topics from Figure 5.1. Participants rated each item using a 4 point Likert scale. Response options included: “very uncomfortable-1”; “somewhat uncomfortable-2”; “somewhat comfortable-3”; and “very comfortable-4.” For the question pertaining to education, the mean score was calculated using only responses from participants currently enrolled in school.

**Figure 5.2. Level of Comfort in Discussing Sensitive Topics and Risk Behaviors**



Levels of comfort reported in this scale were aligned with the frequency of discussion on the same topics, suggesting that the reason topics are not discussed in the home is due to lack of comfort addressing these issues with parents or caregivers. For individual responses to these statements, refer to Table A.7 in Appendix.

## 6. SOCIAL SUPPORT

Social stigma and exclusion can affect children living with HIV or AIDS and may be a deterrent to medication adherence. In this section of the survey, participants were asked about their social support networks, including family, friends, and peers at school (Table 6.1).

**Table 6.1 Availability of Basic Social Support**

Variable	Yes <i>n</i> (%)	No <i>n</i> (%)
Would you tell someone if a boy/girl wanted to be a boy/girlfriend?	295 (42.0)	407 (58.0)
Would you seek help if your friends wanted you to try alcohol or drugs?	254 (36.2)	448 (63.8)
Have someone who helps you when you have a problem?	633 (90.2)	69 (9.8)
Have someone who makes you feel better when you are sad?	525 (74.8)	177 (25.2)
Have someone to play with or spend time with when lonely?	589 (83.9)	113 (16.1)
Have someone who loves you even when you do things they don't like?	352 (50.1)	350 (49.9)
Have someone to talk to when you have questions about HIV?	520 (74.1)	182 (25.9)
Missing	0 (0.0)	0 (0.0)

Each of these questions was followed by an open-ended inquiry in which participants were asked to provide details about who they would turn to for relief or help in the given situation. Respondents who indicated that they did have social support, most often cited their mother or grandmother as the person they would talk to in all situations

except for “someone to play with or spend time with when lonely” and “someone who loves you even when you do things they don’t like” in which “friend” was listed most frequently (50.1% and 22.0%).

Baseline observations suggest the sample population does have relatively strong social networks to assist with problems and to provide support when sad or lonely. Fifty-eight percent of respondents stated that they would not notify anyone if asked to enter into a romantic relationship and 63.8% indicated the same if they were offered alcohol or drugs. These findings are consistent with the previous lines of inquiry which show relationships and alcohol/drugs as sensitive topics that are uncomfortable to discuss with a parent or caregiver.

Further, nearly 50% of participants feel that they do not have someone who loves them when they do something wrong, which may demonstrate a perceived absence of unconditional love. Finally, 74% of participants indicated that they have someone they can talk to when they have questions about their HIV status, leaving over 25% of participants lacking such support. A strong social support network could be a factor in mitigating challenges related to strict ART adherence. Those participants who report not having someone to give them advice on their HIV status may be at a disadvantage.

An additional set of questions was adapted from the 45-item Social Support Behaviors Scale (SSB) to a 24-item scale intended to explore social support networks (Table 6.2). The modified scale yielded a very strong reliability coefficient (.956 Cronbach’s Alpha). Participants were asked to respond to a series of statements on a 5-point Likert scale. Response options included “Always-5”; “Most of the time-4”; “About half of the time-3”; “Sometimes-2”; and “Never-1.” Higher scores indicate greater levels of support. Those items that had an inverse relationship with the scale were reverse-coded. Mean scores for education-related questions were calculated only with responses from participants currently enrolled in school.

**Table 6.2. Social Support Network (N=702)**

Variable	Missing n (%)	Mean (SD)
<b>How does this apply to you?</b>		
Some kids have parents or guardians who don't really understand them.†	0 (0.0)	4.01 (1.47)
Some kids have a close friend who they can tell problems to.	0 (0.0)	3.15 (1.56)
Some kids have parents or guardians who won't seem to want to hear about their children's problems.†	0 (0.0)	3.96 (1.46)
Some kids have a close friend who really understands them.	0 (0.0)	3.24 (1.59)
Some kids have parents or guardians who care about their feelings.	0 (0.0)	3.78 (1.42)
Some kids have a close friend they can talk to about things that bother them.	0 (0.0)	3.26 (1.51)
Some kids have parents or guardians who treat their children like a person who really matters.	0 (0.0)	3.81 (1.42)
Some kids don't have a close friend who they like to spend time with.†	0 (0.0)	3.89 (1.46)
Some kids have current parents or guardians who like them the way they are.	0 (0.0)	3.89 (1.37)
Some kids don't have a close friend who really listens to what they say.†	0 (0.0)	3.78 (1.49)
Some kids have current parents or guardians who don't act like what they children do is important.†	0 (0.0)	3.81 (1.51)
Some kids don't have a close friend who cares about their feelings.†	0 (0.0)	3.82 (1.47)
Some kids have classmates who like them the way they are.*	0 (0.0)	3.69 (1.47)
Some kids have a teacher who helps them if they are upset and have a problem.*	1 (0.1)	3.63 (1.46)
Some kids have classmates that they can become friends with.*	0 (0.0)	3.69 (1.41)
Some kids don't have a teacher who helps them to do their very best.*†	1 (0.1)	3.92 (1.41)
Some kids have classmates who sometimes make fun of them.*†	0 (0.0)	3.71 (1.53)
Some kids do have a teacher who cares about them.*	0 (0.0)	3.59 (1.45)
Some kids have classmates who pay attention to what they say.*	0 (0.0)	3.50 (1.46)
Some kids don't have a teacher who is fair to them.*†	0 (0.0)	4.00 (1.38)
Some kids don't get asked to play games with classmates very often.*†	1 (0.1)	4.00 (1.38)
Some kids don't have a teacher who cares if they feel bad.*†	0 (0.0)	4.06 (1.35)
Some kids often spend holidays being alone.*†	0 (0.0)	3.80 (1.49)
Some kids have a teacher who treats them like a person.*	1 (0.1)	3.75 (1.36)

\*12.7% (N=89) indicated N/A- participants not currently enrolled in school

† Item has been reverse-coded so that higher scores reflect greater social support

Participant response for items pertaining to close friendships had a mean score of 3.15, indicating the support of close friends just over “half the time”. Statements concerning teachers and parents had higher positive mean scores (4.06 and 4.01 respectively), suggesting that social support from these individuals was perceived to occur “most of the time”. Overall, responses fell at or slightly above the median available score, indicating an average or slightly above average social support network. For individual responses to these items, see Table A.8 in Appendix.

## 7. EDUCATION

In the Education section of the survey, students were asked about their experience at school and plans for the future. Below, data is provided separately for participants currently enrolled in school, and for those not currently enrolled. Eight students in the study have never been enrolled in school and are not included in either set of data.

## PARTICIPANTS CURRENTLY ENROLLED IN SCHOOL

In the study population, 613 participants are currently enrolled in school. All tables in this section are based on that subtotal unless otherwise specified. The first part of the survey asked participants to discuss how supported they felt with their current schoolwork and future plans. Table 7.1 below outlines participant responses to some basic background questions.

**Table 7.1 Education Background (N=613)**

Variable	Yes n (%)	No n (%)
During last school term, have you talked to parent/guardian about schoolwork?	550 (89.7)	63 (10.3)
During last school term, have you asked parent/guardian to help you with homework?	438 (71.5)	175 (28.5)
During last school term, have you talked with your current parent/guardian about your future plans?	449 (73.2)	164 (26.85)
Would you talk to someone if you had a problem with your schoolwork?	528 (86.3)	84 (13.7)
Would you talk to someone if your friends wanted you to skip school?	396 (64.6)	217 (35.4)
Have you repeated a class?	281 (45.8)	332 (54.2)
Missing	0 (0.0)	0 (0.0)

Participants reported whom they were mostly likely to ask for help on their schoolwork. The most common answer was friend (19.0%), followed by mother (13.1%), and the third most common was teacher (11.4%). For those students who indicated that they would seek help if a friend asked them to skip school, the most common person they would turn to was a mother (16.5%), followed by grandmother (8.6%) and then aunt (6.4%). Just over 45% of students indicated that they repeated a class in the past. Most students who repeated a class indicated that they repeated Primary 1, 2, or 3. Those classes repeated are recorded in Table A.9 in Appendix A.

In addition to the questions above, two clinical scales were administered to further understand participants' experience at school. The first, an adapted version of the Multidimensional Student Life Satisfaction Scale (MSLSS), sought to understand student satisfaction in several important areas of their lives (Huebner, 1994), listing eight statements that required a rating on a 5-point Likert scale. Response options included "Always-5", "Most of the time-4", "About half of the time-3", "Sometimes-2", and "Never-1." The theoretical range for this scale is 8-40, with higher scores indicating higher levels of satisfaction. Reverse-coding was used for those statements that had an inverse relationship with the scale. Table 7.2 presents the mean scores for each item used in the adapted scale. For individual answers to the MSLSS, see Table A.10 in Appendix A.

**Table 7.2 MSLSS for Participants Enrolled in School (N=613)**

	Mean (SD)
I look forward to going to school each day.	4.46 (0.97)
I like being in school.	4.45 (0.92)
School is interesting	4.27 (1.09)
I wish I didn't have to go to school.†	4.56 (0.94)
There are many things about school I don't like.†	3.93 (1.35)
I enjoy school activities.	4.0 (1.28)
I learn a lot at school.	4.32 (1.03)
I feel bad at school.†	4.26 (1.26)
<b>Total</b>	<b>34.24 (4.85)</b>
	<b>Range 11-40</b>

† Item has been reverse-coded so that higher scores reflect greater school-life satisfaction.

According to the MSLSS, school satisfaction for those participants enrolled in school was high. The mean score for seven out of the eight items fell between 4 and 5. This is consistent with previous scales in the study that contained items measuring school satisfaction.

The Pediatric Quality of Life Inventory (PEDSQL) was also adapted and included to understand participant's physical health as it related to their experience at school. This scale was designed for both healthy and chronically ill children to measure over-all quality of life. For the purposes of this study, questions related to education were selected. Participants were given four statements to rate on a 5-point Likert scale. Response options included, "Always-5", "Most of the time-4", "About half of the time-3", "Sometimes-2", and "Never-1." The theoretical range for this scale is 4-20, with lower scores indicating desired responses. Table 7.3 presents the mean scores for each item used in the adapted scale. For individual answers see Table A.11 in Appendix A.

**Table 7.3 PEDSQL for Participants Enrolled in School (N=613)**

	Mean (SD)
It is hard for me to pay attention in class	2.18 (1.50)
I am forgetful.	2.26 (1.30)
I miss school because of not feeling well.	2.49 (1.28)
I miss school to go to the doctor, clinics or hospitals.	2.88 (1.33)
<b>Total</b>	<b>9.81 (3.60)</b>
	<b>Range 4-40</b>

Respondents recorded lower scores on this scale with a total mean score of 9.81 out of a possible 20. For those currently in school, just over one-fifth (21.4%) of students reported never missing school because of feeling unwell compared with 44.5% who indicated "sometimes" missing school, 9.3% who missed "half of the time", 13.5% who missed "most of the time", and 11.3% who reported "always" missing school. Greater medication adherence may increase general well-being for this population, and thus impact future scores on the PEDSQL.

In addition to their well-being at school, participants also reported information about living arrangements at school, how they get from school to home, and any social problems encountered at school. Fifty-three percent of participants enrolled in school reported having a boarding section at their school. Of those students only 12.6% reported

residing in the boarding section. Most participants (87.8%) reported walking to school. The rest reported using a bicycle, motorcycle, bus or car.

Participants who were enrolled in school were also asked if they had been in a physical or verbal fight over the past school term. The vast majority of students reported no physical fights with teachers, with only 8 respondents indicating a conflict had occurred. Fighting with peers was more common. Of the 613 participants enrolled in school, 11.3% reported physical fights with peers. Fifty-six of those participants reported only one or two fights. When asked about suspensions and expulsions during the previous school term, 99.2% of students reported no suspensions, and 99.7% of students reported no expulsions in the previous school term.

Participants were asked additional questions about their school experience. Thirty-two percent of participants reporting receiving academic assistance in school and only 6.9% reported being involved in a student club. Participants were also asked about their proudest achievement over the last school term. The two most common answers were “nothing” and “I performed well in school.” Only 3.3% (N=20) of participants reported ever thinking about dropping out of school. Those 20 students most often cited severe corporal punishment at school or not feeling well as their reason for considering dropping out. Students were asked about the type of job they wanted after completing school. The top three choices were doctor, nurse, and teacher.

Of those students who were enrolled in school, 89.7% indicated they were planning to attend secondary school. Thirty-three were already attending secondary school and 30 others indicated alternative plans to a secondary education. Combined with the 89 not currently enrolled, this accounts for the total of 152 indicated as N/A in Table 7.4, which shows participants’ confidence level in achieving their educational goals.

**Table 7.4. Confidence in Education Plan**

Variable	Male (N= 306) <i>n (% within gender)</i>	Female (N=396) <i>n (% within gender)</i>	Total (N=702) <i>n (% within total)</i>
<b>Response</b>			
Not at all sure	12 (3.9)	10 (2.5)	22 (3.1)
Slightly Sure	10 (3.3)	20 (5.1)	30 (4.3)
Moderately Sure	50 (16.3)	36 (9.1)	86 (12.3)
Very Sure	49 (16.0)	52 (13.1)	101 (14.4)
Extremely Sure	115 (37.6)	196 (49.5)	311 (44.3)
N/A	70 (22.9)	82 (20.7)	152 (21.7)

Of the 613 students enrolled in school, 30 indicated that they did not plan on attending secondary school. Their alternative plans are reported in Table 7.5 below.

**Table 7.5. Alternatives to Secondary School**

Variable	Male (N= 24) <i>n (% within gender)</i>	Female (N=6) <i>n (% within gender)</i>	Total (N=30) <i>n (% within total)</i>



I have no plans	7 (29.2)	1 (16.7)	8 (26.7)
Get a job and start working	5 (20.8)	0 (0.0)	5 (16.7)
Vocational/ technical training	10 (41.7)	4 (66.7)	14 (46.7)
Other	2 (8.3)	0 (0.0)	2 (6.7)
<i>Become a farmer</i>			
<i>Learn a motor bike</i>			
Missing	0 (0.0)	1 (16.7)	1 (3.3)

Respondents were also asked about their confidence in achieving alternative plans to secondary school. For those interested in obtaining a job, over half (57.1%) indicated there were “extremely sure” in achieving their plans with the remainder of responses evenly ranging from “very sure” to “moderately sure” to “slightly sure”. For those interested in vocational training, half (50.0%) indicated they were “extremely sure” that they would attend with 28.6% reporting they were “slightly sure”, 7.1% “moderately sure”, and 14.3% “very sure” of their attendance.

All participants currently enrolled in school (N=613) were asked to provide an estimate of what would be their highest level of educational attainment. Almost one-fourth of the participants (23.8%) believed they would attend graduate school, 45.4% believed they would attend a four year college and 10.1% believed they would attend a technical college. In sum, 79% of participants envisioned graduating high school and furthering their education. Participants were also asked to think about how they saw themselves in the future. The majority of participants selected the highest rating when asked how much they cared about their future selves (73.4%) and how much they liked their future selves (79.4%).

## PARTICIPANTS NOT CURRENTLY ENROLLED IN SCHOOL

School experience was also explored for those participants who had previously been enrolled but had since dropped out. Of the 89 participants in the study who were not enrolled in school at the time of the baseline interview, eight had never been enrolled in school. The following results are for those 81 participants who had been enrolled in school.

Participants were asked when they left school, for which a wide variety of answers were provided. The point of departure ranged from 2 months prior to the survey, to as long ago as 2001. Of the 81 participants not enrolled in school, 30.9% reported having previously repeated a class. Participants were also asked about distance to their former school and their mode of transportation. Over half (65.4%) indicated that their school was very near to their home “about 1 kilometer” followed by 13.6% who said it was “near – between 1-3 kilometers” and another 13.6% responding that the distance was “far – over 3 kilometers” with a boda boda necessary to get to school. Eighty-five percent of respondents not enrolled in school reported that when they were enrolled, they walked to school. Considering the relatively high percentage of respondents indicating the distance to school as “near” or “very near”, this may suggest that factors other than geographic proximity were responsible for leaving school.

As with participants enrolled in school, an adapted version of the MSLSS and the PEDSQL were included for those students not enrolled in school. Tables 7.6 and 7.7 show the mean score for each item and the total mean score for each scale. For individual scores see Tables A.12 and A.13 in Appendix A.

**Table 7.6. MSLSS for Participants Not Enrolled in School (N= 81)**

	Mean (SD)
I looked forward to going to school each day.	4.49 (0.84)
I liked being in school.	4.38 (1.01)
School was interesting	4.04 (1.26)
I wished I didn't have to go to school.†	4.27 (1.26)
There were many things about school I don't like.†	3.70 (1.47)
I enjoyed school activities.	3.94 (3.94)
I learned a lot at school.	4.09 (1.10)
I felt bad at school.†	4.38 (1.08)
<b>Total</b>	<b>33.23 (5.11)</b>
	<b>Range 20-40</b>

† Item has been reverse-coded so that higher scores reflect greater school-life satisfaction.

Consistent with the currently enrolled students, participants not currently enrolled in school also rated previous school satisfaction very high on the MSLSS. Six of the eight items on the scale have a mean score between four and five. This finding suggests that those children who left school were motivated by factors other than the school experience itself.

**Table 7.7. PEDSQL for Participants Not Enrolled in School (N=81)**

	Mean (SD)
It is hard for me to pay attention in class	1.86 (1.22)
I am forgetful.	2.17 (1.28)
I miss school because of not feeling well.	2.44 (1.12)
I miss school to go to the doctor, clinics or hospitals.	2.88 (1.28)
<b>Total</b>	<b>9.28 (3.25)</b>
	<b>Range 4-20</b>

Also consistent with the PEDSQL scores of currently enrolled students, participants not in school reported that physical health problems sometimes interfered with school performance and attendance. Three of the four items have a score between two and three, indicating that both those students who are enrolled and those who have dropped out of school have experienced negative repercussions due to their illness.

## 8. ATTITUDES ABOUT SAVING

Of the 702 participants, only 29.2% (N=205) indicated that they currently save money. Table 8.1 shows where participants were saving money. This table is based on the subtotal of participants who reported to have had money saved. Respondents were able to provide more than one response.

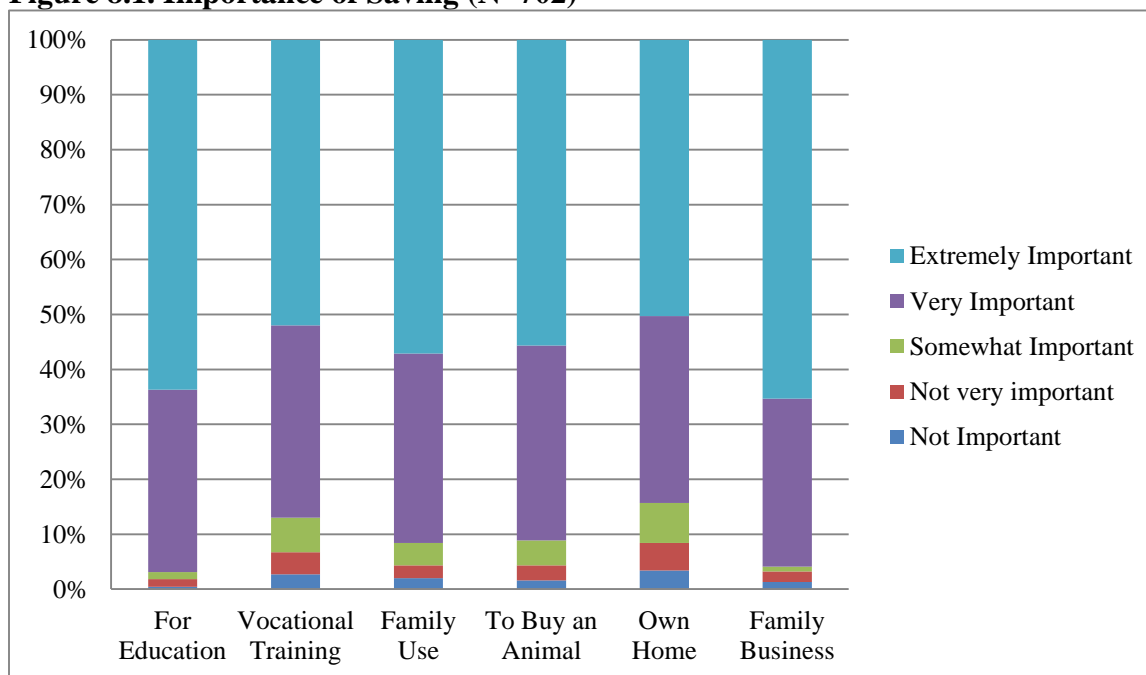
**Table 8.1. Savings Locations (N=205)**

Variable	Yes <i>n</i> (%)	No <i>n</i> (%)
Bank	8 (3.9)	197 (96.1)
Savings and Credit Cooperative	12 (5.9)	193 (94.1)
With current caregiver/parent	103 (50.2)	102 (49.8)
Other	99 (48.3)	106 (51.7)
Missing	0 (0.0)	0 (0.0)

A bank was the least common location to save money. This is not uncommon as access to banks in rural Uganda is quite limited with 83% of the rural population unbanked (Bank of Uganda, 2014). This is consistent with data from earlier in the report that demonstrates a lack of knowledge on formal financial institutions in the area. Similarly, participants who did save, report keeping their money with either a caregiver or parent or “other” places, most frequently citing a “piggy bank” or “bag” as the location where funds were kept.

While saving was not a common practice in the study population, the value that respondents placed on savings and planning for the future was still assessed. Participants were given six statements to rate on a five point Likert scale. Response options included: “Extremely Important-5”, “Very Important-4”, “Somewhat Important-3”, “Not Very Important-2” and “Not Important At All-1.” The total theoretical range for this scale was 6-30, with higher scores indicating desired responses. Figure 8.1 below shows the mean score for each of the six items as well as the total mean score for the scale. For individual answers to each item see Table A.17 in Appendix.

**Figure 8.1. Importance of Saving (N=702)**



Despite the fact that the majority of participants indicated that they do not actively save money, most placed a high value on saving for the future with over 50% of respondents indicating saving as extremely important in all six categories. Overall, responses by sex were very similar with a few exceptions. Females were more likely to consider saving money for education (66.7%) and family business (69.4%) as “extremely important” when compared to males (59.8% and 60.1%).

In addition to the scale rating the importance of saving, participants’ confidence in their ability to save was assessed. Participants were asked how confident they felt in their abilities to save in each of the six categories previously discussed. Possible response options included: “Extremely Confident-5”; “Very Confident-4”, “Somewhat confident-3”, “Not Very Confident-2” and “Not Confident at all-1.” The total theoretical range for this scale was also 5-30, with higher scores indicating greater levels of confidence. Table 8.2 below shows the mean score for each item and the total mean score for the scale. For individual answers to this scale see Table A.18 in Appendix A.

**Table 8.2. Confidence in Ability to Save**

	Mean (SD)
Saving money for a family business	4.37 (0.99)
Saving money for one’s education	4.46 (0.92)
Saving money for vocational, technical, or job training	4.15 (1.16)
Saving money to help one’s family out	4.29 (1.06)
Saving money to buy and animal	4.31 (1.07)
Saving money to move into one’s own home	4.01 (1.26)
<b>Total</b>	<b>25.58 (4.21)</b>
	<b>Range 6-30</b>

Much like the answers to the scale assessing importance of saving, responses to the confidence statements are also high. Each item has a mean score between 4 and 5, and the total mean score is 25.58 out of a possible 30 points. Although most participants are choosing not to save or are currently unable to save, they report high confidence in their ability to do so. In five out of the six categories, females more frequently reported extreme confidence in their ability to save with 68.2% citing extreme confidence in saving for education and 61.9% for family use as opposed to 61.1% of males citing the same for education and 52.6% on saving for family use. Males reported more extreme confidence in their ability to move into their own home (50.0%) when compared to females (48.2%).

## 9. ATTITUDES AND KNOWLEDGE ON HIV AND AIDS

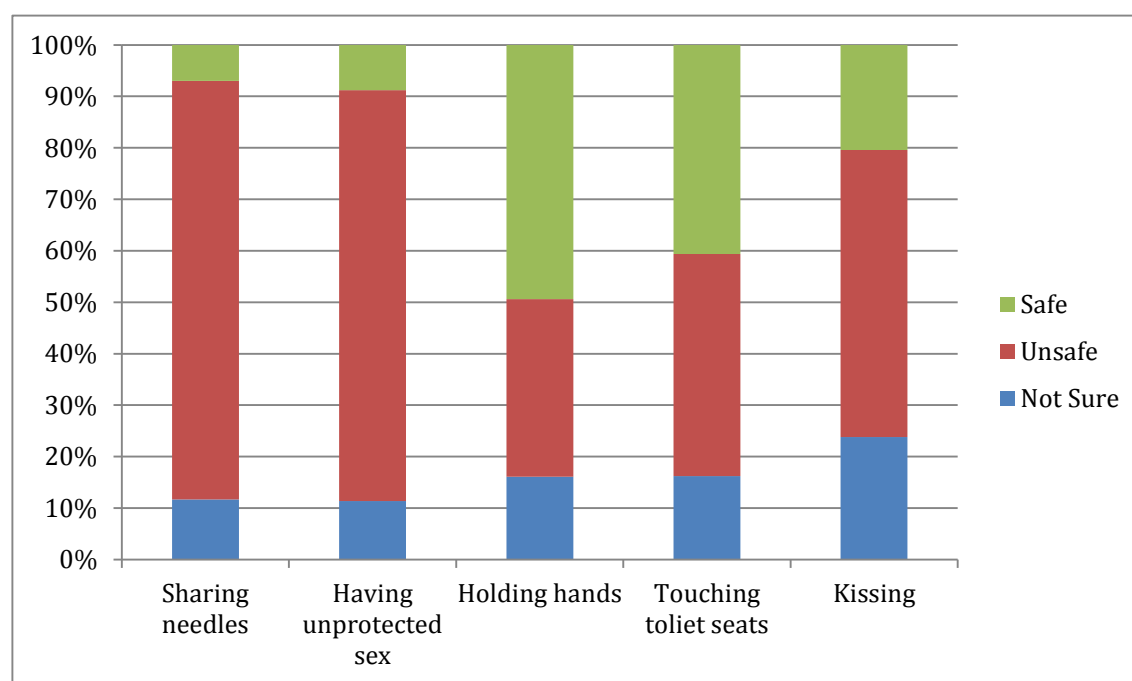
In this section, participants’ knowledge of and prevention attitudes toward HIV and AIDS were assessed. Questions were asked to determine how comfortable they felt about living with HIV, and how it affected their daily life. Table 9.1 below illustrates participant responses when we asked them to rate several statements about prevention. Participants rated each item on a scale of 1-5 in terms of how much they agreed with each statement. Higher scores indicate desired responses for this scale. For individual responses to this scale see Table A.19 in Appendix A.

**Table 9.1. HIV/AIDS Prevention Attitudes**

	Mean (SD)
As a teenager I think AIDS is a threat to my health.	3.99 (1.50)
I think people my age who have sex should use condoms.	3.34 (1.73)
I think the best way to avoid getting AIDS is not to have sex	3.60 (1.63)
Even if you know your partner very well, you should use a condom	3.45 (1.68)
I think it is very important to use condoms every time one has sex	3.52 (1.65)
<b>Total</b>	<b>17.91 (6.15)</b>
	<b>Range 5-25</b>

The first statement on this scale has the highest mean response, indicating that participants are aware of the health risks their illness imposes. The third statement has a higher mean score than those referring to condom use which may be a reflection of the abstinence only curriculum that has been prevalent in Uganda. Below, Figures 9.1, 9.2, and Table 9.2 illustrate participants' knowledge about HIV transmission, prevention and clinical manifestation.

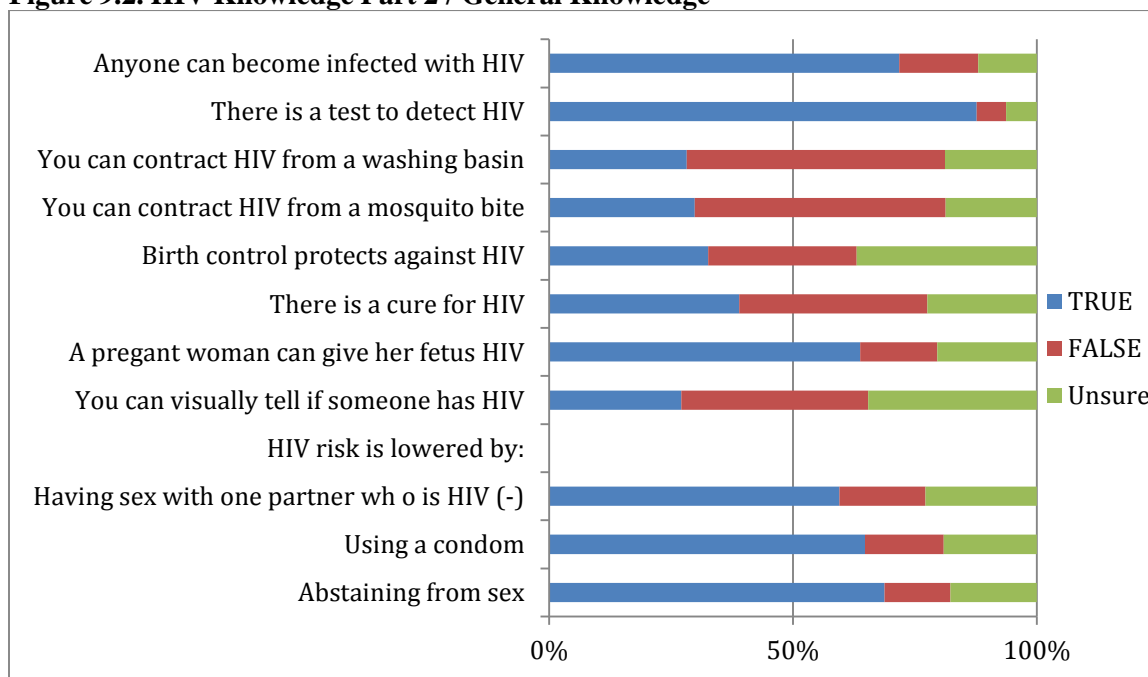
**Figure 9.1. HIV Knowledge Part 1 / HIV Transmission**



In Figure 9.1, participants were given five statements related to HIV transmission. Participants were asked to choose if the activity in the statement was safe or unsafe. They could also indicate “not sure.” The majority of participants were able to identify activities that are considered especially high risk for HIV transmission- intravenous drug use and unprotected sex. Almost 80% of participants reported unprotected sex as unsafe, and 81.3% of participants rated intravenous drug use as unsafe. However, activities that are not a threat for transmission received more varied responses. For instance, over half of the participants chose either “unsafe” or “not sure” for “holding hands with an HIV infected person.” These responses suggest that participants do not have sufficient knowledge about transmission; and/ or that stigma is prevalent in their communities.

Figure 9.2 displays the next section of participant responses on HIV and AIDS knowledge. Participants were given statements related to transmission, risk-behavior, prevention and stigma. They were asked to tell interviewers if each statement was true, false or indicate that they were not sure.

**Figure 9.2. HIV Knowledge Part 2 / General Knowledge**



Similar to Table 9.1, there is a range of correct and incorrect answers in Table 9.2. For statements such as, “There is a test to detect if a person has HIV/AIDS”, we see a large portion of participants displaying accurate knowledge. Over 85% of participants answered “true.” Conversely, for other items in this section we see a higher rate of incorrect answers. Over 60% of participants indicated “true” or “not sure” for the statement “There is a cure for HIV/AIDS.” Preliminary observations suggest that knowledge of HIV and AIDS is incomplete for this population.

Table A.20 in Appendix A illustrates participant clinical knowledge of HIV and AIDS. Participants were given statements related to medication adherence, viral load, and testing measures. Compared to the data illustrated in the previous two tables, participant knowledge is more accurate and consistent in this section.

The majority of participants knew the correct answer for 8 out of 9 items. Over 80% of participants knew that medication needed to be taken regularly at the same time every day and were familiar with the function of a CD4 count. Clinical knowledge may be higher as opposed to prevention/ transmission knowledge, because participants are likely receiving clinical information during their visit to their local healthcare facility. Conversely, prevention and transmission knowledge may be less frequently disseminated.

In addition to assessing participants’ knowledge of HIV, questions were asked as to the level of comfort with one’s HIV status. Table 9.2 below shows participant responses to these questions.

**Table 9.2. HIV Status N=702**

Variable	Male (N= 306) <i>n (% within gender)</i>	Female (N=396) <i>n (% within gender)</i>	Total (N=702) <i>n (% within total)</i>
<b>Do you keep your HIV status a secret from others?</b>			
Never	103 (33.7)	124 (31.3)	227 (32.3)
Sometimes	58 (19.0)	59 (14.9)	117 (16.7)
About half the time	20 (6.5)	22 (5.6)	42 (6.0)
Most of the time	43 (14.1)	47 (11.9)	90 (12.8)
Always	82 (26.8)	144 (36.4)	226 (32.3)
Missing	0 (0.0)	0 (0.0)	0 (0.0)
<b>Do any of your friends know that you have HIV?</b>			
Uncertain	57 (18.6)	71 (17.9)	128 (18.2)
None	123 (40.2)	174 (43.9)	297 (42.3)
Few	56 (18.3)	81 (20.5)	137 (19.5)
Some	57 (18.6)	49 (12.4)	106 (15.1)
All	13 (4.2)	21 (5.3)	34 (4.8)
Missing	0 (0.0)	0 (0.0)	0 (0.0)

**When people find out you have HIV, it is usually because:**

You are taking medication	120 (39.2)	162 (40.9)	442 (63.0)
Symptoms start showing	48 (15.7)	69 (17.4)	91 (13.0)
Someone else tells them	85 (27.8)	100 (25.3)	105 (15.0)
You become ill	18 (5.9)	34 (8.6)	58 (8.3)
You tell them	34 (11.1)	27 (6.8)	2 (0.3)
Don't know	0 (0.0)	4 (1.0)	4 (0.6)
Missing	1 (0.3)	0 (0.0)	1 (0.1)

**How often do you talk to people about your HIV status?**

Never	143 (46.7)	201 (50.8)	344 (49.0)
Rarely	60 (19.6)	89 (22.5)	149 (21.2)
Sometimes	59 (19.3)	75 (18.9)	134 (19.1)
Most of the time	33 (10.8)	21 (5.3)	54 (7.7)
All of the time	11 (3.6)	10 (2.5)	21 (3.0)
Missing	0 (0.0)	0 (0.0)	0 (0.0)

For the first question, “Do you keep your HIV status a secret from others,” there is almost an even split on responses. Forty-nine percent of participants indicated “never” or “sometimes” and 45% indicated “always” or “most of the time” demonstrating that the population has widely varying practices on sharing their HIV status.

There was less variation on the second question- “Do any of your friends know that you have HIV?” Most participants reported “Uncertain,” “none,” or “few.” The third question in this section inquired about how people found out about the respondents HIV status. Most participants reported that others found out about their HIV status because they were taking their medication, or by word-of-mouth. This may allude to the effect of HIV stigma on medication adherence.

Participants were also asked to rate their comfort level when it came to discussing their HIV status. Four scenarios were given to rate on a 4-point Likert scale. Table 9.3 lists the mean scores for each item and the total score for the scale. Higher scores indicate greater levels of comfort in sharing/ discussing their HIV status. Participants reported that they would be very uncomfortable sharing their status with kids at school, close friends or a boy/girlfriend. Participants tended to be somewhat more comfortable sharing their status with family members. For individual answers to this scale see Table A.21 in Appendix A.

**Table 9.3. HIV Status Comfort (Level N=702)**

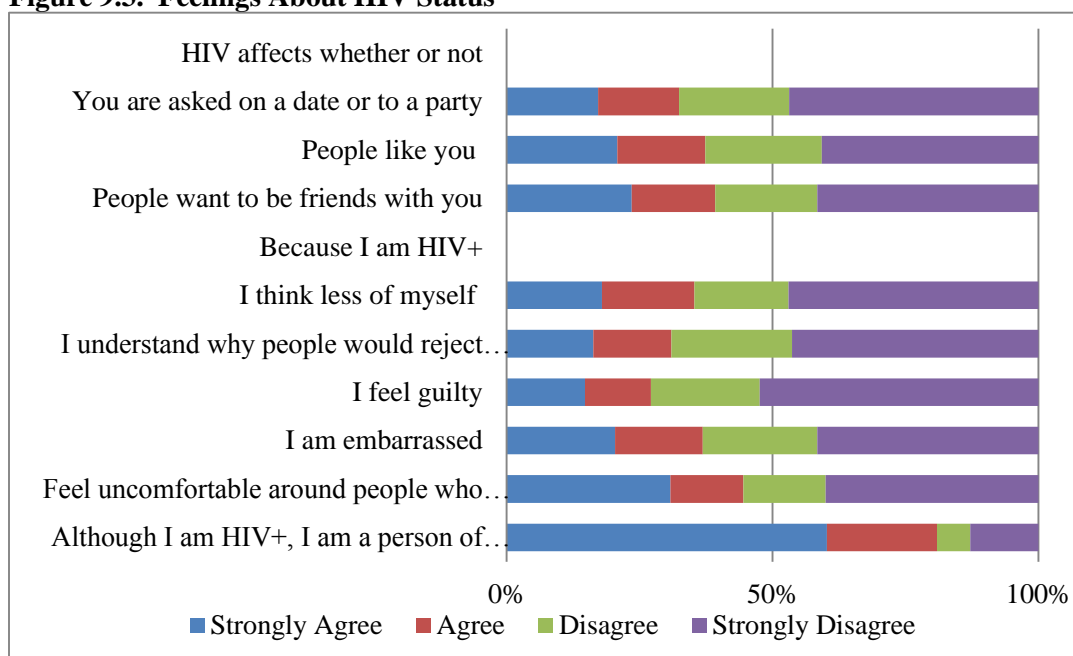
	Mean (SD)
How comfortable do you feel talking about your HIV status to other kids in school?*	1.65 (1.00)
How comfortable do you feel talking about HIV status to your close friends?	1.80 (1.05)
How comfortable do you feel talking about your HIV status to family members who do not know?	2.36 (1.18)
How comfortable do you think you would feel talking about your HIV status to a girl/boyfriend?	1.73 (1.04)
<b>Total</b>	<b>7.34 (3.12)</b>



\*12.7% (N=89) indicated N/A- participants not currently enrolled in school

In addition to comfort level, participants were asked how they felt about living with HIV. Nine statements were provided to rate on a 4-point Likert scale. Figure 9.3 shows the responses to this set of statements.

**Figure 9.3. Feelings About HIV Status**



Eighty-one percent of participants reported that they agreed or strongly agreed with the statement, “Although I have HIV, I am a person of worth.” Additionally 72.9% of participants disagreed or strongly disagreed with the statement “I feel guilty about having HIV.” Though the majority of participants responded favorably to each item in Table 9.3, there still remain a portion of participants that feel isolated, stigmatized, guilty or embarrassed about their diagnosis.

We also asked participants if they felt that people with HIV could have sexual relationships just like people without HIV. Fifty-six point eight percent of the participants said yes, 19.2% were not sure and 23.9% said no.

## 10. PERSONAL HEALTH

Participants were asked to rate their overall life, physical health and energy. About 80% of participants indicated that they were either “extremely satisfied-5” or “very satisfied-4” with their life overall. Additionally 75% of participants reported that their physical health was either “excellent-5” or “good-4.” Responses concerning energy were more varied, with over 50% of participants indicating that they had low energy “sometimes” “often” or “almost always.” Table 10.1 below depicts responses.

**Table 10.1. Personal Health (N=702)**

Variable	Male (N= 306) <i>n (% within gender)</i>	Female (N=396) <i>n (% within gender)</i>	Total (N=702) <i>n (% within total)</i>
<b>How satisfied are you with your life overall?</b>			
Not at all satisfied	21 (6.9)	29 (7.3)	50 (7.1)
Not very satisfied	17 (5.6)	17 (4.3)	34 (4.8)
Somewhat satisfied	25 (8.2)	29 (7.3)	54 (7.7)
Very satisfied	72 (23.5)	67 (16.9)	139 (19.8)
Extremely satisfied	171 (55.9)	254 (64.1)	425 (60.5)
Missing	0 (0.0)	0 (0.0)	0 (0.0)
<b>At the present time, would you say your health is:</b>			
Very poor	32 (10.5)	29 (7.3)	61 (8.7)
Poor	7 (2.3)	8 (2.0)	15 (2.1)
Fair	46 (15.0)	53 (13.4)	99 (14.1)
Good	94 (30.7)	133 (33.6)	227 (32.3)
Excellent	127 (41.5)	173 (43.7)	300 (42.7)
Missing	0 (0.0)	0 (0.0)	0 (0.0)
<b>I have low energy</b>			
Never	92 (30.1)	92 (23.2)	184 (26.2)
Almost never	38 (12.4)	74 (18.7)	112 (16.0)
Sometimes	91 (29.7)	141 (35.6)	232 (33.0)
Often	54 (17.6)	54 (13.6)	108 (15.4)
Almost always	31 (10.1)	35 (8.8)	66 (9.4)
Missing	0 (0.0)	0 (0.0)	0 (0.0)

## 11. HIV MEDICATION ADHERENCE

In order to accurately assess medication adherence, a variety of measures will be utilized in subsequent waves of reporting, including pill counts, pharmacy refill records, CD4 counts, viral load assessments and the Wisepill device to continually measure adherence. The data presented on medication adherence in this baseline report is based solely on participant self-report in response to the survey tool.

Table 11.1 shows participant responses to questions asked about their HIV medication adherence at baseline. Participants were asked how many medicines they were

taking, how long they have been on medication, who assists them with their medication regimen, and how strictly they adhere to their medication plan.

**Table 11.1. HIV Medication Adherence N=702**

Variable	Male (N= 306) <i>n (% within gender)</i>	Female (N=396) <i>n (% within gender)</i>	Total (N=702) <i>n (% within total)</i>
<b>Do you currently take HIV medication?</b>			
Yes	306 (100)	396 (100)	702 (100)
No	0 (0.0)	0 (0.0)	0 (0.0)
<b>How many medicines do you take?</b>			
1	72 (23.5)	88 (22.2)	160 (22.8)
2	154 (50.3)	222 (56.1)	376 (53.6)
3	80 (26.1)	85 (21.5)	165 (23.5)
Don't Know	0 (0.0)	1 (0.3)	1 (0.1)
Missing	0 (0.0)	0 (0.0)	0 (0.0)
<b>Who helps you take your HIV medication?</b>			
Mother	101 (33.0)	153 (38.6)	254 (36.2)
Father	17 (5.6)	21 (5.3)	38 (5.4)
Grandparent	78 (25.5)	103 (26.0)	181 (25.8)
Aunt	25 (8.2)	52 (13.1)	77 (11.0)
No one	60 (19.6)	39 (9.8)	99 (14.1)
Other	25 (8.2)	28 (7.1)	53 (7.5)
Missing	0 (0.0)	0 (0.0)	0 (0.0)
<b>How often does this person help you take your medication?</b>			
Never	4 (1.3)	4 (1.0)	8 (1.1)
Sometimes	52 (17.0)	39 (9.8)	91 (13.0)
About half the time	11 (3.6)	10 (2.5)	21 (3.0)
Most of the time	42 (13.7)	48 (12.1)	90 (12.8)
Always	138 (45.1)	256 (64.6)	394 (56.1)
N/A	59 (19.3)	39 (9.8)	98 (14.0)
Missing	0 (0.0)	0 (0.0)	0 (0.0)

**Table 11.1. Continued - HIV Medication Adherence N=702**

Variable	Male N=306 <i>n (% within gender)</i>	Female N=396 <i>n (% within gender)</i>	Total (N=702) <i>n (% within gender)</i>
<b>How likely is this person to know if you missed medication?</b>			
Very likely	141 (46.1)	249 (62.9)	390 (55.6)
Somewhat likely	45 (14.7)	69 (17.4)	114 (16.2)
Somewhat unlikely	14 (4.6)	8 (2.0)	22 (3.1)
Very unlikely	47 (15.4)	31 (7.8)	78 (11.1)

N/A	59 (19.3)	39 (9.8)	98 (14.0)
Missing	0 (0.0)	0 (0.0)	0 (0.0)
<b>When was the last time you missed your medication?</b>			
Never	196 (64.1)	298 (75.3)	494 (70.4)
Within past week	28 (9.2)	29 (7.3)	57 (8.1)
1-2 weeks ago	17 (5.6)	17 (5.6)	34 (4.8)
2-4 weeks ago	12 (3.9)	8 (2.0)	20 (2.9)
1-3 months ago	18 (5.9)	16 (4.0)	34 (4.8)
More than 3 months ago	35 (11.4)	28 (7.1)	63 (9.0)
Missing	0 (0.0)	0 (0.0)	0 (0.0)
<b>In the last 30 days, how many days did you miss at least one dose of your HIV medications?</b>			
0	223 (72.9)	306 (77.5)	529 (75.4)
1	34 (11.1)	54 (13.7)	88 (12.5)
2	23 (7.5)	23 (5.8)	46 (6.6)
3	15 (4.9)	5 (1.3)	20 (2.9)
4+	11 (3.6)	7 (1.8)	18 (2.6)
Missing	0 (0.0)	0 (0.0)	0 (0.0)

The data collected and illustrated above illustrates the medication adherence trends for the sample population, as indicated through self-report. All participants had been prescribed an ART regimen with over 77% taking 2-3 different medications per day. Mothers were noted as the most common individual assisting with medication adherence (36.2%) and respondents indicated that the person assisting them was very likely to know if a dose was missed (55.6%). Sixty-six point eight percent of participants reported no difficulty adhering to the medication regimen and 72.1% indicated never missing a dose in the past six months. As this data is collected via self-report, future waves will include additional methods to triangulate data on adherence.

While differences between the sexes were negligible in earlier sections, the differing responses on medication adherence were notable. Male respondents were more likely to have “no one” assisting with their medication adherence (19.6%) as opposed to female respondents (9.8%). For those respondents who did have social support for adherence, females perceived the individual assisting them to “always” help (64.6%) compared with males (45.1%). Females also indicated a higher likelihood that their parent or caregiver would know if they missed medication (62.9%) as opposed to 46.1% for boys.

The higher levels of social support may have an effect on regular adherence to ARTs as female respondents were more likely to self-report never missing medication (75.3%) as compared with their male counterparts (64.1%).

## 12. PSYCHOSOCIAL MEASURES

Three adapted clinical assessment tools were included in this section of the Suubi+Adherence survey, namely the Children’s Depression Inventory, the Tennessee Self

Concept Scale and Beck's Hopelessness Scale. The results of each measure are presented individually below.

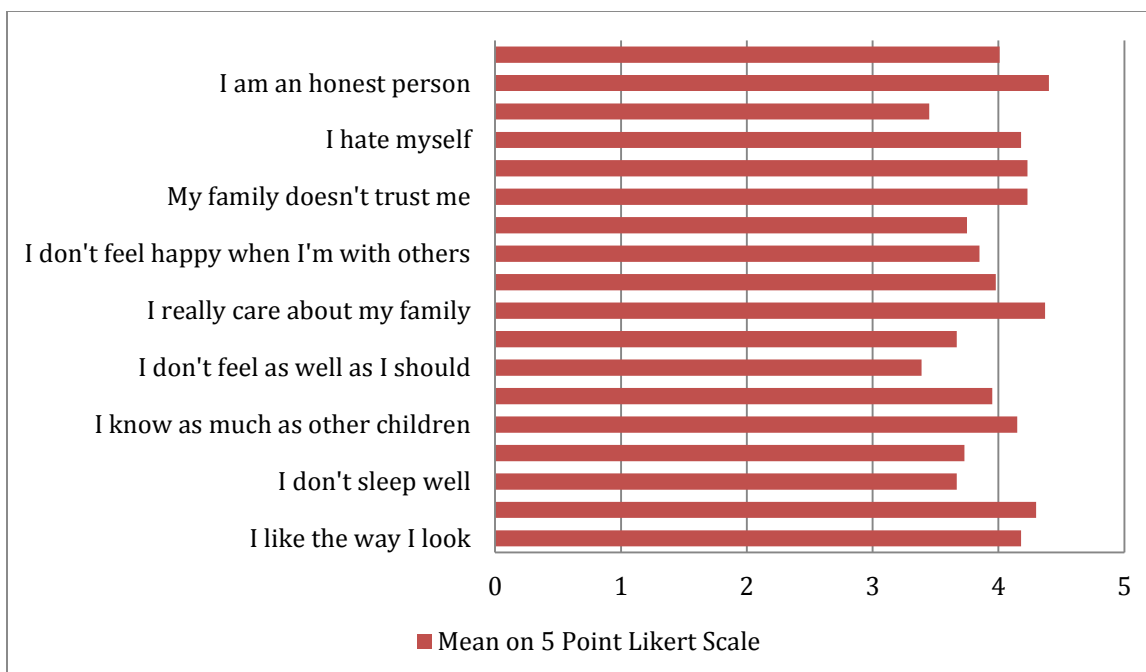
#### CHILDREN'S DEPRESSION INVENTORY

The Children's Depression Inventory is a well-respected and clinically proven test to measure child and adolescent depression, and has proven successful in several different cultural contexts (Thomson, 2012). The CDI is a 28-item scale, adapted to 14 items, that measures both emotional and functional problems that correspond with depression in children. Each item on the CDI has three response options that correspond to varying levels of symptomology for clinical depression (Kovacs, 2014). Coded 0-2, 0 represents no symptom, 1 represents a mild or probable symptom and 2 represents a definite symptom (Kovacs, 2014). For this scale lower scores indicate normal presentation and higher scores point to clinical depression (Kovacs, 2014). The total mean score among the sample of 702 respondents was 0.37, indicating a lack of clinical depressive symptomology. For individual responses to this scale refer to Table A.22 in Appendix A.

#### TENNESSEE SELF CONCEPT SCALE

The Tennessee Self Concept Scale (TSCS) is used to assess "global self-concept" or "subjective well-being" (Tennessee Self Concept, 2014). Items on the scale assess a variety of factors which contribute to a subject's self-concept including overall self-esteem, physical well-being, how well subjects socialize with family and friends, and how they feel about their individual internal morals/ ethics (Tennessee Self Concept, 2014). Though the original scale consists of 100 items, for the purposes of this study the scale was modified to 18 items, with strong internal consistency (Cronbach's alpha = .709). Each statement on the TSCS can be answered with the following: "Always true-5", "Usually True-4", "Sometimes True/ Sometimes False-3", "Usually False- 2" and "Always False-1." In the adapted scale, higher scores indicate higher/ more positive self-concept. Reverse-coding was used for those items that have an inverse relationship with the scale. For statements pertaining to education, mean scores were calculated with responses only from those participants enrolled in school. The theoretical range for this adapted scale is 18-90. Figure 12.1 below illustrates the mean scores for each of the 18 items.

**Figure 12.1. Adapted Tennessee Self-Concept Scale**



*\*Reverse coding was used for items that had an inverse relationship with the scale*

With the exception of two items, all statements on the adapted TSCS resulted in mean scores between 3.5 and 4.5. Participants in this study demonstrated moderate to high scores for self-concept and subjective well-being. This is also reflected in the total mean score for the scale. The item with the lowest mean score was, “I don’t feel as well as I should.” Participants may report lower scores for this item because of their precarious physical wellbeing due to HIV. The two items with the highest mean scores were, “I am an honest person”; and “I really care about my family.” For individual responses to this scale refer to Table A.23 in Appendix A.

## BECK’S HOPELESSNESS SCALE

Hopelessness is a one of the indicators for clinical depression. The Beck’s Hopelessness scale is a 20 item inventory that assesses a subject’s motivation and expectations about the future (Crocker et al. 1994). It is often used in conjunction with other psychosocial measures of depression.

For the purposes of this study, all 20 items were included and the reliability coefficient was moderate (Cronbach’s Alpha = .648). The theoretical range for this scale is 0-20 with higher scores representing more hopelessness. Each statement is answered with true or false, and coded as zero or one. Due to the scoring method for this assessment, mean scores for each item were not recorded. Individual answers to this scale are available in Table A.24 in Appendix A. The normal range is between 0-3, mild hopelessness between 4-8, moderate hopelessness 9-14, and scores above 14 indicate severe levels of hopelessness (Crocker et al, 1994). The total mean score for this scale was 5.66 with a standard deviation of 3.46 and a range of 0-17. The mean indicates mild levels of hopelessness for this population.

## 13. POVERTY

This section of the survey analyzes the types of material goods and financial assets owned by participants prior to the intervention. Table 13.1 and 13.2 below outline participant responses. The majority of respondents indicated owning more than two sets of clothing and at least one blanket. About 67% of participants reported owning either one or two pairs of shoes and almost 85% of participants reported having two (48.2%) or three meals (39.7%) per day over the last 7 days. Over the last 7 days 54.3% of participants reported using sugar in their tea. Only 23.4% of participants reported having electricity in their homes.

**Table 13.1. Poverty Measures**

Variable	Male (N= 306) <i>n (% within gender)</i>	Female (N=396) <i>n (% within gender)</i>	Total (N=702) <i>n (% within total)</i>
<b>Sets of clothes owned</b>			
One	17 (5.6)	13 (3.3)	30 (4.3)
Two	47 (15.4)	56 (14.1)	103 (14.7)
More than two	242 (79.1)	327 (82.6)	569 (81.1)
Missing	0 (0.0)	0 (0.0)	0 (0.0)
<b>Blanket owned</b>			
No	56 (18.3)	80 (20.2)	136 (19.4)
Yes	250 (81.7)	316 (79.8)	566 (80.6)
Missing		0 (0.0)	0 (0.0)
<b>Pairs of shoes owned</b>			
None	52 (17.0)	53 (13.4)	105 (15.0)
One pair	139 (45.4)	169 (42.7)	308 (43.9)
Two pairs	71 (23.2)	96 (24.2)	167 (23.8)
More than two pairs	44 (14.4)	78 (19.7)	122 (17.4)
Missing	0 (0.0)	0 (0.0)	0 (0.0)
<b>How often ate meat/fish last week</b>			
None	77 (25.2)	110 (27.8)	187 (26.6)
Once	79 (25.8)	98 (24.7)	177 (25.2)
Twice	69 (22.5)	79 (19.9)	148 (21.1)
Three times	47 (15.4)	75 (18.9)	122 (17.4)
More than three times	34 (11.1)	34 (8.6)	68 (9.7)
Missing	0 (0.0)	0 (0.0)	0 (0.0)
<b>Average # of meals per day in last 7 days</b>			
None	0 (0.0)	1 (0.3)	11 (0.1)
One	51 (16.7)	33 (8.3)	84 (12.0)
Two	168 (55.1)	170 (42.9)	338 (48.2)
Three	86 (28.2)	192 (48.5)	278 (39.7)
Missing	0 (0.0)	0 (0.0)	0 (0.0)

**Table 13.1. Continued - Poverty Measures**

Variable	Male (N=306) <i>n (% within gender)</i>	Female (N=396) <i>n (% within gender)</i>	Total (N=702) <i>n (% within gender)</i>
<b>In last 7 days, how many times drank tea with sugar</b>			
None	43 (14.1)	44 (11.1)	87 (12.4)
One	23 (7.5)	34 (8.6)	57 (8.1)
Two	42 (13.7)	53 (13.4)	95 (13.5)
Three	43 (14.1)	39 (9.8)	82 (11.7)
More than three	155 (50.7)	226 (57.1)	381 (54.3)
Missing	0 (0.0)	0 (0.0)	0 (0.0)
<b>Does the house you live in have electricity?</b>			
No	235 (76.8)	303 (76.5)	538 (76.6)
Yes	71 (23.2)	93 (23.5)	164 (23.4)
Missing	0 (0.0)	0 (0.0)	0 (0.0)

Common assets in the region are listed in Table 13.2. The most common assets owned for this study population include a house, land, garden, radio and a cell phone.

**Table 13.2. Assets – Does your family own the following?**

Variable	Yes N=702 <i>n (%)</i>
House	646 (92.0)
Land	624 (88.9)
The home you live in	614 (87.5)
Cell phone	602 (85.8)
Banana garden	584 (83.2)
Other gardens	570 (81.2)
Radio	565 (80.5)
Cassava garden	505 (71.9)
Coffee garden	462 (65.8)
Sweet potato garden	459 (65.4)
Bicycle	413 (58.8)
Poultry	387 (55.1)
Pig	385 (54.8)
Goat	320 (45.6)
Cow	248 (35.3)
A small business/retail store/ kiosk	203 (28.9)
Television	153 (21.8)
Motorcycle	146 (20.8)
Rental property	128 (18.2)
Any other animal	107 (15.2)
Car	66 (9.4)
Missing	0 (0.0)

*\*Respondents were able to select more than one answer*



After determining assets, participants were asked additional questions related to poverty level. The following text summarizes responses to these questions. The majority of participants reported living in a brick house with iron sheets and cemented floors (57.5%) or without cemented floors (29.8%). Only 12.1% reported living in a mud house and 0.6% reported living in a hut. We asked participants if they were currently working for pay and 90.7% reported that they were not working. Of the 9.3% (N=65) that were working, the majority reported doing garden work (N=32), housework (N=17) or construction (N=8). The work was most commonly done for neighbors or family members. The vast majority (N=60) of those that worked received shillings as pay. Others reported receiving school fees or food. When asked about what they did with the money the two most common answers were “bought clothes” or “saved the money.” Of those participants that worked, 8 reported having a second job and 1 reported having a third job.

## **14. EDUCATION AND EMPLOYMENT BACKGROUND FOR CAREGIVERS**

In this section of the survey, participants were asked to tell us about their primary caregivers. Participants reported mother, father or grandmother most often when asked to indicate their primary caregiver. These responses accounted for 70% of the participants, with 20-25% of participants indicating each of the three responses. The next most common answer was aunt (10%), followed by uncle (6.1%). When asked about who financially supported them the most, participants responded similarly. The three most common answers were mother, father and grandmother- accounting for 65% of the participants. The next most common answers were aunt (12.2%) and grandfather (9.3%). Eighty-nine point two percent of participants reported that their financial supporter was not employed in the formal sector. Many of the participants’ families in these communities are subsistence farmers. The majority of participants (55.1%) reported not knowing what education level their financial supporter had achieved. Twenty-seven percent of participants reported that their financial supporter had either not graduated primary school or secondary school, and 57.3% of participants did not know the education level of their financial supporter.

## **15. YOUTH RISK BEHAVIOR**

In the Youth Risk section of the survey, participants were asked about any drug and alcohol use. Data for this portion of the survey was collected via confidential self-report and was returned in a sealed envelope. Participants were provided precise instructions on how to fill the form, however, several cases of non-response did occur, as indicated in the below table as “missing” data. Table 15.1 below outlines responses on drug and alcohol use.

**Table 15.1 Drug and Alcohol Use**

Variable	Male	Female	Total
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	(N= 306) <i>n (% within gender)</i>	(N=396) <i>n (% within gender)</i>	(N=702) <i>n (% within total)</i>
<b>Tried cigarettes</b>			
Yes	4 (1.3)	2 (0.5)	6 (0.8)
No	300 (98.0)	393 (99.2)	693 (98.7)
Missing	2 (0.7)	1 (0.3)	3 (0.4)
<b>Tried alcohol</b>			
Yes	12 (3.9)	15 (3.8)	27 (3.8)
No	294 (96.1)	381 (96.2)	675 (96.2)
Missing	0 (0.0)	0 (0.0)	0 (0.0)
<b>Tried marijuana</b>			
Yes	1 (0.3)	2 (0.5)	3 (0.4)
No	301 (98.4)	392 (99.0)	693 (98.2)
Missing	4 (1.3)	2 (0.5)	6 (0.8)
<b>Tried another drug (other than listed above)</b>			
Yes	3 (1.0)	3 (0.7)	6 (0.9)
No	302 (98.7)	390 (98.5)	692 (98.6)
Missing	1 (0.3)	3 (0.7)	4 (0.6)

Overall, the use of drugs, alcohol, and cigarettes among the study population is reported to be low though these findings are subject to response bias. Only 0.8% (n=6) of respondents indicated trying cigarettes, 3.8% (n=27) trying alcohol, and 0.4% (n=3) trying marijuana. Only 0.9% (n=6) reported using other drugs, specifically “Mayirungi” and “mululuza.” Mayirungi is a stimulant and mululuza is a medicinal herb.

## 16. SEXUAL RISK BEHAVIOR

In this section of the survey, participants answered questions related to their attitudes toward sex and their sexual behavior. The mean response for most appropriate age to have a girl/boyfriend was 22 years old. Only 8.7% of respondents (N=60) reported currently having a romantic partner and 11.2% (N=76) indicated they ever had a boy/girlfriend. Only 2.6% of respondents reported ever having kissed a girl/ boy (N=18) in a romantic way. Further, 80.1% of participants reported that there was no peer pressure to have sex at their age. In addition to these questions, participants were given five statements to rate using a five point Likert scale. Response options included “Never-1”, “Sometimes-2”, “About half the time-3”, “Most of the time-4” and “Always-5.” For this scale lower scores represented desired responses. As with the above youth risk behaviors questionnaire, data on sexual risk attitudes was collected via a confidential self-report survey completed and submitted by the participant in a sealed envelope. This method was selected to facilitate more accurate reporting to sensitive questions and attempt to mitigate response bias; however, it also resulted in higher levels of missing data, ranging from 6 to 14 per item. Missing data was removed prior to calculating mean scores. Table 16.1 lists mean scores for each item assessing sexual risk attitudes.

**Table 16.1. Sexual Risk Attitudes N=702**

	Mean (SD)
Ok for people my age to have sex with someone they've just met.	1.85 (1.47)
Ok for people my age to have sex with someone they love.	1.85 (1.36)
Ok for people my age to have sex before marriage	2.00 (1.46)
Ok for people my age to force a boy/ girlfriend to have sex when they don't want to	1.90 (1.40)
Ok for people child's age to have sex without protection with someone they know.	1.89 (1.40)
<b>Total</b>	

Participants were also asked what age would be appropriate to have sex. The mean response was 22 years of age. Of the total 702 participants, 4.7% (N=33) reported having had sexual intercourse, with ten respondents (8 females and 2 males) indicating they had experienced at least one unwanted sexual encounter. Thirty-one participants responded to the question on type of protection used during last willing sexual encounter. Approximately half (N=16) of those participants who had sex reported that they had used no method of protection, 35.5% (N=11) reported using condoms, and 3.2% (N=1) reported using the withdrawal method. Three participants, 9.7% reported birth control as their form of protection during the last time they had sex. Eight participants reported having sex at least once without a condom in the past 30 days. This data suggests that nearly 2/3 of participants who have been or are currently sexually active are using inadequate methods to prevent transmission of HIV and putting their intimate partner at risk. For individual responses to the items on this scale, refer to Table A.25 in Appendix A.

## 17. SELF-EFFICACY

Self-efficacy was measured as it related to medication adherence. Participants were asked to provide their confidence level in adhering to their medication regimen, even if it became inconvenient or difficult. Participants were given twelve statements to rate on a scale from one to ten. One indicated low levels of confidence and ten indicated high levels of confidence. Table 17.1 below shows the mean score for each item as well as the total mean score for the scale. For individual responses to the items in this scale see Table A.26 in Appendix A. The theoretical range for this scale is 12-120.

**Table 17.1. Self-Efficacy Scale N=702**

	Mean (SD)
<b>In the past month, how confident have you been that you can:</b>	
Stick to your treatment plan even when side effects begin to interfere with daily activities.	7.82 (2.95)
Integrate your treatment into your daily routine.	7.74 (2.85)
Integrate your treatment into your daily routine even if it means taking medication or doing other things in front of people who don't know you are HIV-infected.	7.33 (2.99)
Stick to your treatment schedule even when your daily routine is disrupted.	7.92 (2.66)
Stick to your treatment schedule when you are not feeling well.	7.97 (2.59)

Stick to your treatment schedule when it means changing your eating habits.	7.81 (2.71)
Continue with your treatment even if doing so interferes with your daily activities.	8.03 (2.71)
Continue with your treatment even when getting to your appointments is a major hassle.	7.96 (2.69)
Continue with your treatment even when people close to you tell you that they don't think that it is doing any good.	8.05 (2.71)
Continue with the treatment plan your physician prescribed even if your T-cells drop significantly in the next three months.	7.77 (2.80)
Continue with your treatment even when you are feeling discouraged about your health.	7.97 (2.72)
Get something positive out of your participation in treatment, even if medications you are taking does not improve your health.	7.92 (2.80)
<b>Total</b>	<b>94.28 (23.23)</b>
	<b>Range 20-120</b>

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The results in Table 17.1 indicate high levels of confidence in adhering to HIV medication. Each item has a mean score over 7 and the total mean score is 94.28. On each item in the scale, females more frequently reported full confidence in adherence, answering with a score of “10” more often than males. Discrepancy between male and female responses were most pronounced when asked how confident they were to stick to their ART regimen even if it meant taking medication in front of people that were not aware of their HIV status. Only 31.4% of males suggested full confidence in their ability to adhere in this situation compared to 45.8% of females.

As this and other areas of inquiry on adherence are limited to self-report, medication adherence for this study will also be monitored through pharmacy refill records, pill counts, CD4 counts and use of the Wisepill device.

## 18. CONCLUSION

The baseline report for Suubi+Adherence offers a detailed understanding of the sample population prior to the economic intervention. Data was collected and analyzed for 702 HIV positive youth in Southwestern Uganda in the following areas: demographics; community satisfaction; psychosocial concerns; parental relationships; family cohesion and support; education; future plans; saving habits; HIV/AIDS prevention attitudes, knowledge and stigma; personal health; HIV medication adherence; depression and other clinical concerns; drug and alcohol use; sexual risk taking behavior; and self-efficacy. The data obtained in each of these categories provides individual benchmarks from which change will be measured post intervention. As data was collected via self-report, under-reporting of risk behaviors and over-reporting of medication adherence is a limitation. Future waves of reporting will include triangulation of data to measure adherence.

## APPENDIX A - EXTENDED TABLES

**Table A.1. Community Satisfaction Individual - Answers (N=702)**

Variable	Never	Sometimes	About half the time	Most of the time	Always	Missing
	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>
I like where I live.	43 (6.1)	88 (12.5)	76 (10.8)	100 (14.2)	395 (56.3)	0 (0.0)
I wish I lived in a different house.	398 (56.7)	128 (18.2)	38 (5.4)	48 (6.8)	90 (12.8)	0 (0.0)
I wish I lived in another village	396 (52.6)	141 (20.1)	57 (8.1)	59 (8.4)	75 (10.7)	1 (0.1)
I like my village.	61 (8.7)	107 (15.2)	73 (10.4)	111 (15.8)	350 (49.9)	0 (0.0)
I like my neighbors	47 (6.7)	96 (13.7)	81 (11.5)	129 (18.4)	348 (49.6)	1 (0.1)
This village is filled with not nice people.	263 (37.5)	204 (29.1)	65 (9.3)	77 (11.0)	93 (13.2)	0 (0.0)
My family's house is nice.	88 (12.5)	137 (19.5)	81 (11.5)	120 (17.1)	276 (39.3)	0 (0.0)
There are a lot of fun things to do where I live.	107 (15.2)	165 (23.5)	79 (11.3)	114 (16.2)	237 (33.8)	0 (0.0)

**Table A.2. Changes after Parental Death**

	Paternal Death N=317 <i>n (%)</i>	Maternal Death N=318 <i>n (%)</i>
<b>Effects of father's death on the way child feels about life</b>		
Happy/ contented	73 (23.0)	73 (23.0)
Sad/ sorrowful	219 (69.1)	218 (68.6)
Worried	213 (67.2)	198 (62.3)
Angry	166 (52.4)	171 (53.8)
Scared	177 (55.8)	171 (53.8)
Isolated/ alone	206 (65.0)	192 (60.4)
Determined to do well	237 (75.0)	244 (76.7)
Comforted/ relieved	216 (68.1)	225 (70.8)
Other	0 (0.0)	1 (0.3)
Missing	0 (0.0)	0 (0.0)
<b>What child misses most about parent</b>		
Paying my school fees	153 (48.3)	85 (26.7)
Buying me food	86 (27.1)	81 (25.5)
Buying me clothes	122 (38.5)	120 (37.7)
Buying the necessities	118 (37.2)	94 (29.6)
His love	118 (37.2)	187 (58.8)
His care	104 (32.8)	162 (50.9)
Other	49 (15.5)	47 (14.8)
Missing	0 (0.0)	0 (0.0)
<b>Number of times participant moved after parental death</b>		
0	143 (45.1)	133 (41.8)
1	106 (33.4)	103 (32.5)
2	29 (9.1)	37 (11.7)
3	22 (6.9)	26 (8.2)
4	11 (3.5)	9 (2.8)
5+	4 (1.2)	3 (0.9)
Don't Know	2 (0.6)	5 (1.6)
Missing	0 (0.0)	1 (0.3)

*\*Participants allowed to select more than one answer on first two questions*

**Table A.3. Family Cohesion - Individual Answers (N=702)**

Variable	Never	Sometimes	About half the time	Most of the time	Always	Missing
	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>
Family members ask each other for help before asking non-family members.	65 (9.3)	116 (16.5)	46 (6.6)	134 (19.1)	341 (48.6)	0 (0.0)
Family members like to spend free time with each other.	57 (8.1)	88 (12.5)	61 (8.7)	156 (22.2)	340 (48.4)	0 (0.0)
Family members feel close to each other.	52 (7.4)	86 (12.3)	67 (9.50)	148 (21.1)	349 (49.7)	0 (0.0)
Child is available when other family members want to talk.	40 (5.7)	115 (16.4)	40 (5.7)	132 (18.8)	375 (53.4)	0 (0.0)
Child listens to what other family members have to say even when you disagree.	47 (6.7)	76 (10.8)	59 (8.4)	126 (17.9)	394 (56.1)	0 (0.0)
Family does things together.	49 (7.0)	97 (13.8)	60 (8.5)	144 (20.5)	352 (50.1)	0 (0.0)
Parents take time to listen to child.	37 (5.3)	95 (13.5)	56 (8.0)	128 (18.2)	386 (55.0)	0 (0.0)
If child has a problem, parents offer help.	25 (3.6)	88 (12.5)	64 (9.1)	142 (20.2)	383 (54.6)	0 (0.0)

**Table A.4. Child-Caregiver Communication (N=702)**

Variable	Missing n (%)	Mean (SD)
Child can count on parent/ guardian to help in case of a problem	0 (0.0)	3.98 (1.32)
Parent/ guardian asks child not to argue with adults†	0 (0.0)	2.52 (1.56)
Parent/ guardian pushes child to do best in whatever s/he does	0 (0.0)	4.1 (1.25)
Parent/ guardian asks child to give in on arguments†	0 (0.0)	2.95 (1.63)
Parent/ guardian pushes child to think independently	0 (0.0)	2.89 (1.64)
Parent/ guardian punishes child when s/he gets poor grades in school†	0 (0.0)	3.7 (1.57)
Parent/ guardian shows interest in child's school work	0 (0.0)	4.18 (1.21)
Parent/ guardian tells child that their ideas are correct and not to be questioned†	0 (0.0)	3.2 (1.62)
Parent/ guardian explains why they want the child to do something	0 (0.0)	3.92 (1.33)
Whenever child argues with parent/ guardian, they say; "you will know better when you grow up." †	0 (0.0)	3.11 (1.60)
Parent/ guardian encourages child to try harder if s/he gets poor marks in school	0 (0.0)	4.12 (1.30)
Parent/ guardian let child make own plans for things s/he wants to do	1 (0.1)	2.87 (1.64)
Parent/ guardian knows child's friends	3 (0.4)	3.59 (1.51)
Parent/ guardian acts cold and unfriendly if child does something they don't like†	0 (0.0)	2.84 (1.59)
Parent/ guardian spends time just talking with the child	0 (0.0)	3.74 (1.44)
Parent/ guardian makes the child feel guilty when s/he gets poor marks in school†	0 (0.0)	4.2 (1.37)
Parent/ guardian does fun things together	0 (0.0)	3.68 (1.45)
Parent/ guardian stops child from doing things with them if the child does something they don't like†	0 (0.0)	3.67 (1.55)

† Item has been reverse-coded so that higher scores reflect higher child-caregiver communication.



**Table A.5. Child-Caregiver Communication - Individual Answers (N=702)**

Variable	Never <i>n (%)</i>	Sometimes <i>n (%)</i>	About half the time <i>n (%)</i>	Most of the time <i>n (%)</i>	Always <i>n (%)</i>	N/A <i>n (%)</i>	Missing <i>n (%)</i>
Child can count on parent/ guardian to help in case of a problem	52 (7.4)	86 (12.3)	51 (7.3)	146 (20.8)	367 (52.3)	0 (0.0)	0 (0.0)
Parent/ guardian asks child not to argue with adults	137 (19.5)	91 (13.0)	40 (5.7)	167 (23.8)	267 (38.)	0 (0.0)	0 (0.0)
Parent/ guardian pushes child to do best in whatever s/he does	46 (6.6)	58 (8.3)	64 (9.1)	147 (20.9)	387 (55.1)	0 (0.0)	0 (0.0)
Parent/ guardian asks child to give in on arguments	201 (28.6)	106 (15.1)	57 (8.1)	134 (19.1)	204 (29.1)	0 (0.0)	0 (0.0)
Parent/ guardian pushes child to think independently	226 (32.2)	118 (16.8)	56 (8.0)	109 (15.5)	193 (27.5)	0 (0.0)	0 (0.0)
Parent/ guardian punishes child when s/he gets poor grades in school*	302 (43.0)	105 (15.0)	33 (4.7)	64 (9.1)	109 (15.5)	89 (12.7)	0 (0.0)
Parent/ guardian shows interest in child's school work*	36 (5.1)	46 (6.6)	50 (7.1)	123 (17.5)	358 (51.0)	89 (12.7)	0 (0.0)
Parent/ guardian tells child that their ideas are correct	231 (32.9)	140 (19.9)	53 (7.5)	100 (14.2)	178 (25.4)	0 (0.0)	0 (0.0)
Parent/ guardian explains why they want the child to do something	59 (8.4)	81 (11.5)	54 (7.7)	170 (24.2)	338 (48.1)	0 (0.0)	0 (0.0)
Whenever child argues with parent/ guardian, they say; "you will know better when you grow up."	214 (30.5)	121 (17.2)	71 (10.1)	122 (17.4)	174 (24.8)	0 (0.0)	0 (0.0)
Parent/ guardian encourages child to try harder if s/he gets poor marks in school*	46 (6.6)	58 (8.3)	38 (5.4)	103 (14.7)	368 (52.4)	89 (12.7)	0 (0.0)
Parent/ guardian let child make own plans for things s/he wants to do	221 (31.5)	138 (19.7)	41 (5.8)	112 (16.0)	189 (26.9)	0 (0.0)	1 (0.1)
Parent/ guardian knows child's friends	104 (14.8)	104 (14.8)	59 (8.4)	140 (19.9)	292 (41.6)	0 (0.0)	3 (0.4)
Parent/ guardian acts cold and unfriendly if child does something they don't like	164 (23.4)	125 (17.8)	70 (10.0)	122 (17.4)	221 (31.5)	0 (0.0)	0 (0.0)
Parent/ guardian spends time just talking with the child	73 (10.4)	116 (16.5)	57 (8.1)	128 (18.2)	328 (46.7)	0 (0.0)	0 (0.0)
Parent/ guardian makes the child feel guilty when s/he gets poor marks in school*	415 (59.1)	69 (9.8)	28 (4.0)	37 (5.3)	64 (9.1)	89 (12.7)	0 (0.0)
Parent/ guardian does fun things together	80 (11.4)	112 (16.0)	68 (9.7)	135 (19.2)	307 (43.7)	0 (0.0)	0 (0.0)
Parent/ guardian stops child from doing things with them if the child does something they don't like	328 (46.7)	136 (19.4)	39 (5.6)	78 (11.1)	121 (17.2)	0 (0.0)	0 (0.0)

\*On education related questions, those not enrolled in school responded "n/a"

**Table A.6. Discussion of Risk Behaviors/ Sensitive Issues - Individual Answers (N=702)**

Variable	Never	Sometimes	About half the time	Most of the time	Always	N/A	Missing
	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>
Alcohol/ Drinking	566 (80.6)	49 (7.0)	18 (2.6)	22 (3.1)	47 (6.7)	0 (0.0)	0 (0.0)
Cigarette Smoking	604 (86.3)	34 (4.8)	10 (1.4)	13 (1.9)	39 (5.6)	0 (0.0)	0 (0.0)
HIV/AIDS	180 (25.6)	121 (17.2)	38 (5.4)	122 (17.4)	241 (34.3)	0 (0.0)	0 (0.0)
STDs	439 (62.5)	87 (12.4)	28 (4.0)	64 (9.1)	84 (12.0)	0 (0.0)	0 (0.0)
Having Sex	517 (73.6)	61 (8.7)	24 (3.4)	41 (5.8)	59 (8.4)	0 (0.0)	0 (0.0)
Bad Friends	405 (57.7)	98 (14.0)	46 (6.6)	59 (8.4)	94 (13.4)	0 (0.0)	0 (0.0)
Education*	80 (4.3)	51 (7.3)	39 (5.6)	113 (16.1)	380 (54.1)	89 (12.7)	0 (0.0)
Puberty	290 (41.3)	140 (19.9)	43 (6.1)	85 (12.1)	144 (20.5)	0 (0.0)	0 (0.0)
The future	122 (17.4)	106 (15.1)	56 (8.0)	123 (17.5)	295 (42.)	0 (0.0)	0 (0.0)
Pregnancy	458 (65.2)	75 (10.7)	22 (3.1)	43 (6.1)	104 (14.8)	0 (0.0)	0 (0.0)
Marriage	569 (81.1)	58 (8.3)	11 (1.6)	22 (3.1)	42 (6.0)	0 (0.0)	0 (0.0)

\*On education related questions, those not enrolled in school responded "n/a"

**Table A.7. Level of Comfort in Discussing Risk Behaviors - Individual Answers (N=702)**

Variable	Very Uncomfortable	Somewhat Uncomfortable	Somewhat comfortable	Very comfortable	N/A	Missing
	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>
Alcohol/ drinking	520 (74.1)	106 (15.1)	32 (4.6)	42 (6.0)	0 (0.0)	2 (0.3)
Cigarette Smoking	547 (77.9)	102 (14.5)	18 (2.6)	33 (4.7)	0 (0.0)	2 (0.3)
STDs	452 (64.4)	117 (16.7)	78 (11.1)	52 (7.4)	0 (0.0)	3 (0.4)
HIV/AIDS	279 (39.7)	101 (14.4)	154 (21.9)	166 (23.6)	0 (0.0)	2 (0.3)
Having Sex	458 (65.2)	115 (16.4)	68 (9.7)	59 (8.4)	0 (0.0)	2 (0.3)
Bad Friends	374 (53.3)	149 (21.2)	84 (12.0)	93 (13.20)	0 (0.0)	2 (0.3)
Education*	11 (1.6)	7 (1.0)	65 (9.3)	529 (75.4)	89 (12.7)	1 (0.1)
Puberty	229 (32.6)	113 (16.1)	154 (21.9)	204 (29.1)	0 (0.0)	2 (0.3)
The future	27 (3.8)	26 (3.7)	159 (22.6)	488 (69.5)	0 (0.0)	2 (0.3)
Pregnancy	387 (55.1)	109 (15.5)	84 (12.0)	120 (17.1)	0 (0.0)	2 (0.3)
Marriage	447 (63.7)	90 (12.8)	88 (12.5)	75 (10.7)	0 (0.0)	2 (0.3)

\*On education related questions, those not enrolled in school responded "n/a"

**Table A.8. Social Support Network - Individual Answers (N=702)**

Variable	Never	Sometimes	About half the time	Most of the time	Always	N/A	Missing
	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>
<b>How does this apply to you?</b>							
Some kids have parents or guardians who don't really understand them.	430 (61.3)	91 (13.0)	36 (5.1)	50 (7.1)	95 (13.5)	0 (0.0)	0 (0.0)
Some kids have a close friend who they can tell problems to.	146 (20.8)	155 (22.1)	60 (8.5)	129 (18.4)	212 (30.2)	0 (0.0)	0 (0.0)
Some kids have parents or guardians who won't seem to want to hear about their children's problems.	404 (57.5)	105 (15.0)	45 (6.4)	56 (8.0)	92 (13.1)	0 (0.0)	0 (0.0)
Some kids have a close friend who really understands them.	146 (20.8)	138 (19.7)	57 (8.1)	121 (17.2)	240 (34.2)	0 (0.0)	0 (0.0)
Some kids have parents or guardians who care about their feelings.	78 (11.1)	88 (12.5)	65 (9.3)	148 (21.1)	323 (46.0)	0 (0.0)	0 (0.0)
Some kids have a close friend they can talk to about things that bother them.	121 (17.2)	153 (21.8)	60 (8.5)	157 (22.4)	211 (30.1)	0 (0.0)	0 (0.0)
Some kids have parents or guardians who treat their children like a person who really matters.	80 (11.4)	80 (11.4)	68 (9.7)	141 (20.1)	333 (47.4)	0 (0.0)	0 (0.0)
Some kids don't have a close friend who they like to spend time with.	372 (53.0)	133 (18.9)	43 (6.1)	59 (8.4)	95 (13.5)	0 (0.0)	0 (0.0)
Some kids have current parents or guardians who like them the way they are.	57 (8.1)	100 (14.2)	58 (8.3)	133 (18.9)	354 (50.4)	0 (0.0)	0 (0.0)
Some kids don't have a close friend who really listens to what they say.	342 (48.7)	142 (20.2)	44 (6.3)	72 (10.3)	102 (14.5)	0 (0.0)	0 (0.0)
Some kids have current parents or guardians who don't act like what they children do is important.	353 (50.3)	140 (19.9)	39 (5.6)	60 (8.5)	110 (15.7)	0 (0.0)	0 (0.0)
Some kids don't have a close friend who cares about their feelings.	350 (49.9)	139 (19.8)	43 (6.1)	77 (11.0)	93 (13.2)	0 (0.0)	0 (0.0)
Some kids have classmates who like them the way they are.	76 (10.8)	89 (12.7)	62 (8.8)	111 (15.8)	275 (39.2)	89 (12.7)	0 (0.0)
Some kids have a teacher who helps them if they are upset and have a problem.*	77 (11.0)	100 (14.2)	48 (6.8)	134 (19.1)	253 (36.0)	89 (12.7)	1 (0.1)
Some kids have classmates that they can become friends with.*	61 (8.7)	105 (15.0)	49 (7.0)	146 (20.8)	252 (35.9)	89 (12.7)	0 (0.0)
Some kids don't have a teacher who helps them to do their very best.*	317 (45.2)	129 (18.4)	37 (5.3)	60 (8.5)	69 (9.8)	89 (12.7)	1 (0.1)
Some kids have classmates who sometimes make fun of them.*	289 (41.2)	123 (17.5)	37 (5.3)	64 (9.1)	100 (14.2)	89 (12.7)	0 (0.0)
Some kids do have a teacher who cares about them.*	71 (10.1)	109 (15.5)	65 (9.3)	122 (17.4)	246 (35.0)	89 (12.7)	0 (0.0)
Some kids have classmates who pay attention to what they say.*	84 (12.0)	103 (14.7)	69 (9.8)	134 (19.1)	223 (31.8)	89 (12.7)	0 (0.0)
Some kids don't have a teacher who is fair to them.*	339 (48.3)	118 (16.8)	39 (5.6)	53 (7.5)	64 (9.1)	89 (12.7)	0 (0.0)
Some kids don't get asked to play games with classmates very often.*	335 (47.7)	122 (17.4)	37 (5.3)	53 (7.5)	65 (9.3)	89 (12.7)	1 (0.1)
Some kids don't have a teacher who cares if they feel bad.*	349 (49.7)	121 (17.2)	34 (4.8)	51 (7.3)	58 (8.3)	89 (12.7)	0 (0.0)
Some kids often spend holidays being alone.*	303 (43.2)	121 (17.2)	42 (6.0)	59 (8.4)	88 (12.5)	89 (12.7)	0 (0.0)
Some kids have a teacher who treats them like a person.*	53 (7.5)	93 (13.2)	59 (8.4)	153 (21.8)	254 (36.2)	89 (12.7)	1 (0.1)

\*On education related questions, those not enrolled in school responded "n/a"

**Table A.9. Class Repetition Rates for Currently Enrolled Students (N=281)**

	N=281 <i>n (%)</i>
<b>Class</b>	
Baby Class	4 (1.4)
Middle Class	2 (0.7)
Primary 1	58 (20.6)
Primary 2	66 (23.7)
Primary 3	52 (18.5)
Primary 4	42 (15.0)
Primary 5	24 (8.5)
Primary 6	14 (5.0)
Primary 7	4 (1.4)
Senior 1	1 (0.4)
Senior 2	1 (0.4)
Top Class	11 (3.9)
Missing	1 (0.4)

**Table A.10. MSLSS Participants in School - Individual Answers (N=613)**

Variable	Never	Sometimes	About half the time	Most of the time	Always	N/A	Missing
	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>
I look forward to going to school each day.	12 (1.7)	34 (4.8)	40 (5.7)	98 (14.0)	429 (61.1)	89 (12.7)	0 (0.0)
I like being in school.	7 (1.0)	34 (4.8)	41 (5.8)	125 (17.8)	406 (57.8)	89 (12.7)	0 (0.0)
School is interesting	9 (1.3)	69 (9.8)	43 (6.1)	119 (17.0)	373 (53.1)	89 (12.7)	0 (0.0)
I wish I didn't have to go to school.	459 (65.4)	95 (13.5)	20 (2.8)	20 (2.8)	19 (2.7)	89 (12.7)	0 (0.0)
There are many things about school I don't like.	289 (41.2)	175 (24.9)	29 (4.1)	53 (7.5)	66 (12.7)	89 (12.7)	1 (0.1)
I enjoy school activities.	32 (4.6)	89 (12.7)	42 (6.0)	137 (19.5)	313 (44.6)	89 (12.7)	0 (0.0)
I learn a lot at school.	9 (1.3)	52 (7.4)	50 (7.1)	126 (17.9)	376 (53.6)	89 (12.7)	0 (0.0)
I feel bad at school.	399 (56.8)	108 (15.4)	27 (3.8)	25 (3.6)	54 (7.7)	89 (12.7)	0 (0.0)

**Table A.11. PedsQL Participants in School - Individual Answers (N=613)**

Variable	Never	Sometimes	About half the time	Most of the time	Always	N/A	Missing
	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>
It is hard for me to pay attention in class	320 (45.6)	97 (13.8)	45 (6.4)	66 (9.4)	85 (12.1)	89 (12.7)	0 (0.0)
I am forgetful.	206 (29.3)	233 (33.2)	44 (6.3)	69 (9.8)	61 (8.7)	89 (12.7)	0 (0.0)
I miss school because of not feeling well.	131 (18.7)	273 (38.9)	57 (8.1)	83 (11.8)	69 (9.8)	89 (12.7)	0 (0.0)
I miss school to go to the doctor, clinics or hospitals.	67 (9.5)	268 (38.2)	64 (9.1)	98 (14.0)	116 (16.5)	89 (12.7)	0 (0.0)

**Table A.12. MSLSS Out of School Participants – Individual Answers (N=81)**

Variable	Never	Sometimes	About half the time	Most of the time	Always	N/A	Missing
	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>
I look forward to going to school each day.	0 (0.0)	4 (0.6)	7 (1.0)	17 (2.4)	53 (7.5)	621 (88.5)	0 (0.0)
I like being in school.	1 (0.1)	7 (1.0)	4 (0.6)	17 (2.4)	52 (7.4)	621 (88.5)	0 (0.0)
School is interesting	3 (0.4)	12 (1.7)	8 (1.1)	14 (2.0)	44 (6.3)	621 (88.5)	0 (0.0)
I wish I didn't have to go to school.	54 (7.7)	13 (1.9)	1 (0.1)	8 (1.1)	5 (0.7)	621 (88.5)	0 (0.0)
There are many things about school I don't like.	35 (5.0)	20 (2.8)	3 (0.4)	13 (1.9)	10 (1.4)	621 (88.5)	0 (0.0)
I enjoy school activities.	5 (0.7)	8 (1.1)	6 (0.9)	30 (4.3)	32 (4.6)	621 (88.5)	0 (0.0)
I learn a lot at school.	1 (0.1)	11 (1.6)	6 (0.9)	25 (3.6)	38 (5.4)	621 (88.5)	0 (0.0)
I feel bad at school.	51 (7.3)	22 (3.1)	1 (0.1)	2 (0.3)	5 (0.7)	621 (88.5)	0 (0.0)

**Table A.13. PedsQL Out of School Participants N=81- Individual Answers**

Variable	Never	Sometimes	About half the time	Most of the time	Always	N/A	Missing
	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>
It is hard for me to pay attention in class	44 (6.3)	21 (3.0)	4 (0.6)	7 (1.0)	5 (0.7)	621 (88.5)	0 (0.0)
I am forgetful.	29 (4.1)	32 (4.6)	5 (0.7)	7 (1.0)	8 (1.1)	621 (88.5)	0 (0.0)
I miss school because of not feeling well.	12 (1.7)	44 (6.3)	7 (1.0)	13 (1.9)	5 (0.7)	621 (88.5)	0 (0.0)
I miss school to go to the doctor, clinics or hospitals.	9 (1.3)	38 (5.4)	4 (0.6)	20 (2.8)	10 (1.4)	621 (88.5)	0 (0.0)

**Table A.14. Confidence in Alternate Plans (N=30)**

Variable	Slightly Sure	Moderately Sure	Very Sure	Extremely Sure	N/A	Missing
	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>
How sure are you that you will get a job?	1 (3.3)	1 (3.3)	1 (3.3)	4 (13.3)	23 (76.7)	0 (0.0)
How sure are you that you will go to vocational training?	4 (1.3)	1 (3.3)	2 (6.7)	7 (23.3)	16 (53.3)	0 (0.0)

**Table A.15. School Distance (N=81)**

Variable	Very Near <i>n</i> (%)	Near <i>n</i> (%)	Far <i>n</i> (%)	Very Far <i>n</i> (%)	N/A <i>n</i> (%)	Missing <i>n</i> (%)
How far was your school from your home?*	53 (65.4)	11 (13.6)	11 (13.6)	1 (1.2)	5 (6.2)	0 (0.0)

\*Children who attended boarding school responded "n/a"

**Table A.16. Transportation to School (N=81)**

Variable	Walking <i>n</i> (%)	Bicycle <i>n</i> (%)	Boda Boda <i>n</i> (%)	N/A <i>n</i> (%)	Missing <i>n</i> (%)
How far was your school from your home?*	69 (85.2)	3 (3.7)	4 (4.9)	5 (6.2)	0 (0.0)

\*Children who attended boarding school responded "n/a"

**Table A.17. Importance of Saving - Individual Answers (N=702)**

Variable	Not important at all <i>n</i> (%)	Not very important <i>n</i> (%)	Somewhat important <i>n</i> (%)	Very important <i>n</i> (%)	Extremely important <i>n</i> (%)	Missing <i>n</i> (%)
Saving money for a family business	9 (1.3)	13 (1.9)	6 (0.9)	215 (30.6)	459 (65.4)	0 (0.0)
Saving money for one's education	3 (0.4)	10 (1.4)	9 (1.3)	233 (33.2)	447 (63.7)	0 (0.0)
Saving money for vocation, technical or job training	19 (2.7)	28 (4.0)	44 (6.3)	246 (35.0)	365 (52.0)	0 (0.0)
Saving money to help one's family out	14 (2.0)	16 (2.3)	29 (4.1)	242 (34.5)	400 (57.0)	1 (0.1)
Saving money to by an animal	11 (1.6)	19 (2.7)	32 (4.6)	249 (35.5)	391 (55.7)	0 (0.0)
Saving money to move into one's own home	24 (3.4)	35 (5.0)	51 (7.3)	239 (34.0)	353 (50.3)	0 (0.0)

**Table A.18. Confidence in Ability to Save- Individual Answers (N=702)**

Variable	Not confident at all <i>n</i> (%)	Not very confident <i>n</i> (%)	Somewhat confident <i>n</i> (%)	Very confident <i>n</i> (%)	Extremely confident <i>n</i> (%)	Missing <i>n</i> (%)
Saving money for a family business	20 (2.8)	30 (4.3)	49 (7.0)	175 (24.9)	428 (61.0)	0 (0.0)
Saving money for one's education	17 (2.4)	21 (3.0)	41 (5.8)	166 (23.6)	457 (65.1)	0 (0.0)
Saving money for vocation, technical or job training	42 (6.0)	38 (5.4)	65 (9.3)	186 (26.5)	371 (52.8)	0 (0.0)
Saving money to help one's family out	27 (3.8)	39 (5.6)	46 (6.6)	184 (26.2)	406 (57.8)	0 (0.0)
Saving money to by an animal	28 (4.0)	33 (4.7)	57 (8.1)	157 (22.4)	426 (60.7)	1 (0.1)
Saving money to move into one's own home	56 (8.0)	47 (6.7)	74 (10.5)	181 (25.8)	344 (49.0)	0 (0.0)

**Table A.19. HIV/AIDS Prevention Attitudes - Individual Answers (N=702)**

Variable	Not at all agree <i>n (%)</i>	Agree a little <i>n (%)</i>	Moderately agree <i>n (%)</i>	Agree a lot <i>n (%)</i>	Agree a great deal <i>n (%)</i>	Missing <i>n (%)</i>
As a teenager I think AIDS is a threat to my health.	108 (15.4)	30 (4.3)	51 (7.3)	87 (12.4)	426 (60.7)	0 (0.0)
I think people my age who have sex should use condoms.	202 (28.8)	57 (8.1)	42 (6.0)	99 (14.1)	302 (43.0)	0 (0.0)
I think the best way to avoid getting AIDS is not to have sex	147 (20.9)	60 (8.5)	60 (8.5)	92 (13.1)	343 (48.9)	0 (0.0)
Even if you know partner very well, you should use a condom	174 (24.8)	61 (8.7)	53 (7.5)	100 (14.2)	314 (44.7)	0 (0.0)
I think it is very important to use condoms every time one has sex	163 (23.2)	57 (8.1)	55 (7.8)	103 (14.7)	324 (46.2)	0 (0.0)

**Table A.20. HIV Clinical Knowledge (N=702)**

Variable	Not Sure <i>n (%)</i>	False <i>n (%)</i>	True <i>n (%)</i>	Missing <i>n (%)</i>
CD4 count testing measures how many soldier cells we have.	94 (13.4)	24 (3.4)	584 (83.2)	0 (0.0)
When a person is feeling healthy or their CD4 count is high, it is okay for them to stop taking their medication.	115 (16.4)	439 (62.5)	148 (21.1)	0 (0.0)
When a person's CD4 count drops, h/she has fewer soldier cells to fight infections.	133 (18.9)	144 (20.5)	425 (60.5)	0 (0.0)
Medication for HIV should be taken two times a day and doses should be evenly spaced out.	56 (8.0)	51 (7.3)	595 (84.8)	0 (0.0)
Viral load tests measure how much HIV is in the blood.	136 (19.4)	57 (8.1)	509 (72.5)	0 (0.0)
If the viral load is "undetectable", this means there's no virus left in the body.	198 (28.2)	232 (33.0)	272 (38.7)	0 (0.0)
If we say that the virus is resistant to a particular kind of medication that means that the medicine no longer works to lower or slow down the virus.	158 (22.5)	177 (25.2)	367 (52.3)	0 (0.0)
The virus can become resistant if medication doses are missed.	102 (14.5)	117 (16.7)	483 (68.8)	0 (0.0)
HIV can be passed from mother to child.	76 (10.8)	59 (8.4)	567 (80.8)	0 (0.0)

**Table A.21. Comfort with HIV Status- Individual Answers (N=702)**

Variable	Very Uncomfortable <i>n (%)</i>	Somewhat Uncomfortable <i>n (%)</i>	Somewhat Comfortable <i>n (%)</i>	Very Comfortable <i>n (%)</i>	N/A <i>n (%)</i>	Missing <i>n (%)</i>
<b>How comfortable do you (would you) feel...</b>						
Talking about your HIV status to other kids in school?*	399 (56.8)	89 (12.7)	67 (9.5)	58 (8.3)	89 (12.7)	0 (0.0)
Talking about HIV status to your close friends?	399 (56.8)	119 (17.0)	110 (15.7)	74 (10.5)	0 (0.0)	0 (0.0)
Talking about your HIV status to family members who do not know?	249 (35.5)	111 (15.8)	185 (26.4)	157 (22.4)	0 (0.0)	0 (0.0)
Talking about your HIV status to a girl/boyfriend?	430 (61.3)	103 (14.7)	96 (13.7)	72 (10.3)	0 (0.0)	1 (0.1)

**Table A.22. Adapted CDI - Individual Answers (N=702)**

	N=702 <i>n (%)</i>		N=702 <i>n (%)</i>
I am sad once in a while	457 (65.1)	I look ok	548 (78.1)
I am sad many times	72 (10.3)	There are some bad things about my looks	82 (11.7)
I am sad all the time	168 (23.9)	I look ugly	71 (10.1)
Missing	5 (0.7)	Missing	1 (0.1)
Nothing will ever work out for me	19 (2.7)	I am tired once in a while	482 (68.7)
I am not sure if things will work out for me	133 (18.9)	I am tired many days	94 (13.4)
Things will work out for me ok	550 (78.3)	I am tired all the time	125 (17.8)
Missing	0 (0.0)	Missing	1 (0.1)
I do most things ok	595 (84.8)	Most days I do not feel like eating	54 (7.7)
I do many things wrong	49 (7.0)	Many days I do not feel like eating	74 (10.5)
I do everything wrong	59 (8.3)	I eat pretty well	574 (81.8)
Missing	0 (0.0)	Missing	0 (0.0)
I hate myself	36 (5.1)	I do not worry about aches and pains	299 (42.6)
I do not like myself	24 (3.4)	I worry about aches and pains many times	149 (21.2)
I like myself	642 (91.5)	I worry about aches and pains all the time	254 (36.2)
Missing	0 (0.0)	Missing	0 (0.0)
I do not think about killing myself	542 (77.2)	I do not feel alone	398 (56.7)
I think about killing myself but I would not do it	147 (20.9)	I feel alone many times	159 (22.6)
I want to kill myself	12 (1.7)	I feel alone all the time	145 (20.7)
Missing	1 (0.1)	Missing	0 (0.0)
I feel like crying everyday	38 (5.4)	I have plenty of friends	419 (59.7)
I feel like crying many days	30 (4.3)	I have some friends but I wish I had more	167 (23.8)
I feel like crying once in a while	611 (87.0)	I do not have any friends	116 (16.5)
Missing	23 (3.2)	Missing	0 (0.0)
Things bother me all the time	41 (5.8)	Nobody really loves me	26 (3.7)
Things bother me many times	47 (6.7)	I am not sure if anybody loves me	55 (7.8)
Things bother me once in a while	609 (86.8)	I am sure that somebody loves me	621 (88.5)
Missing	5 (0.7)	Missing	0 (0.0)



**Table A.23. Tennessee Self Concept Assessment- Individual Answers (N=702)**

Variable	Always False	Usually False	Sometimes True/Some times False	Usually True	Always True	N/A	Missing
	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>
I like the way I look	46 (6.6)	34 (4.8)	87 (12.4)	117 (16.7)	418 (59.5)	0 (0.0)	0 (0.0)
I have a happy family.	22 (3.1)	36 (5.1)	75 (10.7)	145 (20.7)	424 (60.4)	0 (0.0)	0 (0.0)
I don't sleep well	319 (45.4)	91 (13.0)	134 (19.1)	69 (9.8)	89 (12.7)	0 (0.0)	0 (0.0)
It's hard for me to do what's right.	321 (45.7)	110 (15.7)	112 (16.0)	76 (10.8)	83 (11.8)	0 (0.0)	0 (0.0)
I know as much as the other children in my class*	30 (4.3)	35 (5.0)	87 (12.4)	119 (17.0)	342 (48.7)	89 (12.7)	0 (0.0)
I'm happy with who I am	58 (8.3)	45 (6.4)	109 (15.5)	148 (21.1)	341 (48.6)	0 (0.0)	1 (0.1)
I don't feel as well as I should	231 (32.9)	112 (16.0)	161 (22.9)	94 (13.4)	104 (14.8)	0 (0.0)	0 (0.0)
It's hard for me to be around other people	336 (47.9)	88 (12.5)	94 (13.4)	78 (11.1)	106 (15.1)	0 (0.0)	0 (0.0)
I really care about my family	23 (3.3)	30 (4.3)	63 (9.0)	132 (18.8)	454 (64.7)	0 (0.0)	0 (0.0)
I'm as nice as I should be.	52 (7.4)	44 (6.3)	123 (17.5)	133 (18.9)	350 (49.9)	0 (0.0)	0 (0.0)
I don't feel happy when with other people	348 (49.6)	117 (16.7)	98 (14.0)	60 (8.5)	79 (11.3)	0 (0.0)	0 (0.0)
It's hard for someone to be my friend	341 (48.6)	99 (14.1)	100 (14.2)	71 (10.1)	91 (13.0)	0 (0.0)	0 (0.0)
My family doesn't trust me	461 (65.7)	93 (13.2)	57 (8.1)	32 (4.6)	59 (8.4)	0 (0.0)	0 (0.0)
I get along well with other people	32 (4.6)	37 (5.3)	86 (12.3)	132 (18.8)	415 (59.1)	0 (0.0)	0 (0.0)
I hate myself	442 (63.0)	92 (13.1)	71 (10.1)	47 (6.7)	50 (7.1)	0 (0.0)	0 (0.0)
I'm not the person I would like to be	257 (36.6)	108 (15.4)	144 (20.5)	75 (10.7)	117 (16.7)	0 (0.0)	1 (0.1)
I am an honest person	22 (3.1)	34 (4.8)	57 (8.1)	122 (17.4)	467 (66.5)	0 (0.0)	0 (0.0)
I feel good most of the time	39 (5.6)	33 (4.7)	149 (21.2)	144 (20.5)	336 (47.9)	0 (0.0)	1 (0.1)

\*On education related questions, those not enrolled in school responded "n/a"

**Table A.24. Adapted Beck's Hopelessness - Individual Answers (N=702)**

Variable	False <i>n (%)</i>	True <i>n (%)</i>	Missing <i>n (%)</i>
I look forward to the future with hope and enthusiasm	61 (8.7)	641 (91.3)	0 (0.0)
I might as well give up because there is nothing I can do about making the things better for myself	398 (56.7)	304 (43.3)	0 (0.0)
When things are going badly, I am helped by knowing that they cannot stay that way forever	185 (26.4)	517 (73.6)	0 (0.0)
I can't imagine what my life would be like in ten years' time	235 (33.5)	467 (66.5)	0 (0.0)
I have enough time to accomplish the things I want to do	105 (15.0)	597 (85.0)	0 (0.0)
In the future, I expect to succeed in what concerns me most	78 (11.1)	624 (88.9)	0 (0.0)
My future seems dark	524 (74.6)	178 (25.4)	0 (0.0)
I happen to be particularly lucky, and I expect to get more of the good things in life than the average person	75 (10.7)	627 (89.3)	0 (0.0)
I just can't get breaks, and there is no reason I will in the future	420 (59.8)	282 (40.2)	0 (0.0)
My past experiences have prepared me well for the future.	156 (22.2)	546 (77.8)	0 (0.0)
All I can see ahead is unpleasant rather than pleasant	526 (74.9)	176 (25.1)	0 (0.0)
I don't expect to get what I really want	461 (65.7)	241 (34.3)	0 (0.0)
When I look ahead to the future I expect that I will be happier than I am now.	92 (13.1)	610 (86.9)	0 (0.0)
Things just won't work out the way I want them to	401 (57.1)	301 (42.9)	0 (0.0)
I have great faith in the future	109 (15.5)	593 (84.5)	0 (0.0)
I never get what I want, so it's foolish to want anything	448 (63.8)	254 (36.2)	0 (0.0)
It's very unlikely that I will get any real satisfaction in the future	395 (56.3)	307 (43.7)	0 (0.0)
The future seems vague and uncertain to me	460 (65.5)	242 (34.5)	0 (0.0)
I can look forward to more good times than the bad times	98 (14.0)	604 (86.0)	0 (0.0)
There is no use in really trying to get anything I want because I probably won't get it	438 (62.4)	264 (37.6)	0 (0.0)

**Table A.25. Sexual Risk Attitudes - Individual Answers (N=702)**

Variable	Never <i>n (%)</i>	Sometimes <i>n (%)</i>	About half the time <i>n (%)</i>	Most of the time <i>n (%)</i>	Always <i>n (%)</i>	Missing <i>n (%)</i>
Ok for people my age to have sex with someone they've just met.	481 (68.5)	61 (8.7)	17 (2.4)	39 (5.6)	96 (13.5)	9 (1.3)
Ok for people my age to have sex with someone they love.	436 (62.1)	106 (15.1)	37 (5.3)	36 (5.1)	75 (10.7)	12 (1.7)
Ok for people my age to have sex before marriage	419 (59.7)	81 (11.5)	46 (6.6)	55 (7.8)	87 (12.4)	14 (2.0)
Ok for people my age to force a boy/ girlfriend to have sex when they don't want to	446 (63.5)	76 (10.8)	41 (5.8)	62 (8.8)	71 (10.1)	6 (0.9)
Ok for people child's age to have sex without protection with someone they know.	441 (62.8)	87 (12.4)	37 (5.3)	49 (7.0)	77 (11.0)	11 (1.6)

**Table A.26. Self-Efficacy- Individual Answers (N=702)**

Variable	1 <i>n (%)</i>	2 <i>n (%)</i>	3 <i>n (%)</i>	4 <i>n (%)</i>	5 <i>n (%)</i>	6 <i>n (%)</i>	7 <i>n (%)</i>	8 <i>n (%)</i>	9 <i>n (%)</i>	10 <i>n (%)</i>	Missing <i>n (%)</i>
<b>In the past month, how confident are you that you can:</b>											
Stick to your treatment plan even when side effects begin to interfere with daily activities.	44 (6.3)	30 (4.3)	16 (2.3)	15 (2.1)	67 (9.5)	25 (3.6)	29 (4.1)	52 (7.4)	63 (9.0)	361 (51.4)	0 (0.0)
Integrate your treatment into your daily routine.	40 (5.7)	26 (3.7)	21 (3.0)	17 (2.4)	53 (7.5)	50 (7.1)	36 (5.1)	46 (6.6)	103 (14.7)	310 (44.2)	0 (0.0)
Integrate your treatment into your daily routine even if it means taking medication or doing other things in front of people who don't know you are HIV-infected.	51 (7.3)	30 (4.3)	23 (3.3)	31 (4.4)	59 (8.4)	44 (6.3)	51 (7.3)	65 (9.3)	70 (10.0)	277 (39.5)	1 (0.1)
Stick to your treatment schedule even when your daily routine is disrupted.	24 (3.4)	20 (2.8)	21 (3.0)	28 (4.0)	50 (7.1)	46 (6.6)	43 (6.1)	68 (9.7)	67 (9.5)	335 (47.7)	0 (0.0)
Stick to your treatment schedule when you are not feeling well.	23 (3.3)	15 (2.1)	20 (2.8)	18 (2.6)	69 (9.8)	47 (6.7)	39 (5.6)	60 (8.5)	80 (11.4)	331 (47.2)	0 (0.0)
Stick to your treatment schedule when it means changing your eating habits.	28 (4.0)	24 (3.4)	15 (2.1)	26 (3.7)	62 (8.8)	49 (7.0)	46 (6.6)	49 (7.0)	87 (12.4)	316 (45.0)	0 (0.0)
Continue with your treatment even if doing so interferes with your daily activities.	31 (4.4)	15 (2.1)	18 (2.6)	31 (4.4)	48 (6.8)	34 (4.8)	41 (5.8)	53 (7.5)	70 (10.0)	361 (51.4)	0 (0.0)
Continue with your treatment even when getting to your appointments is a major hassle.	27 (3.8)	21 (3.0)	21 (3.0)	21 (3.0)	53 (7.5)	41 (5.8)	49 (7.0)	42 (6.0)	89 (12.7)	338 (48.1)	0 (0.0)
Continue with your treatment even when people close to you tell you that they don't think that it is doing any good.	32 (4.6)	23 (3.3)	14 (2.0)	20 (2.8)	45 (6.4)	38 (5.4)	29 (4.1)	65 (9.3)	79 (11.3)	355 (50.6)	2 (0.3)
Continue with the treatment plan your physician prescribed even if your Tcells drop significantly in the next three months.	35 (5.0)	20 (2.8)	27 (3.8)	21 (3.0)	60 (8.5)	39 (5.6)	42 (6.0)	52 (7.4)	88 (12.5)	318 (45.3)	0 (0.0)
Continue with your treatment even when you are feeling discouraged about your health.	26 (3.7)	27 (3.8)	18 (2.6)	26 (3.7)	50 (7.1)	36 (5.1)	32 (4.6)	63 (9.0)	77 (11.0)	347 (49.4)	0 (0.0)
Get something positive out of your participation in treatment, even if medications you are taking does not improve your health.	36 (5.1)	21 (3.0)	22 (3.1)	13 (1.9)	64 (9.1)	30 (4.3)	44 (6.3)	40 (5.7)	82 (11.7)	350 (49.9)	0 (0.0)

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