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GROWING UP GREAT!



BASELINE REPORT

USAID FROM THE AMERICAN PEOPLE

BILL & MELINDA GATES foundation

Passages

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TABLE OF CONTENTS

About the Global Early Adolescent Study 1

Overview 1

Instruments 1

Longitudinal Study 1

Study Setting 2

Intervention 2

Study Design 4

Study Population 4

Findings 5

Study Population 5

Sociodemographic Characteristics 6

Family Structure 7

Peers 9

School 10

Neighborhood 11

Vignettes-Based Measure of Gender Equality 12

Gender Norms 16

Empowerment 17

Adverse Childhood Experiences, Bullying & Violence 19

Overall Health and Body Comfort 20

Menstruation 21

Mental Health & Substance Abuse 22

Sexual Health Knowledge 23

Relationships 25

Sexual Behavior 26

Limitations 27

Implications for the Intervention 29

Appendix I: Study Methodology and Data Quality Results 30

Appendix II - Individual Items for Scales 35

Appendix III - Geas Kinshasa Report Tables 36

References 38

TABLE OF FIGURES

Figure 1: The Social Ecological Model 3
Figure 2: The GUG! Toolkit 4
Figure 3: Distribution of In School and Out of School Adolescents by Wealth Quintile 6
Figure 4: IS and OOS Parental Structure 7
Figure 5: IS and OOS Perceived Caregiver Education Expectations 8
Figure 6: IS and OOS Perceived Caregiver Marital Expectations 8
Figure 7: Distribution of IS and OOS adolescents with Same-Sex Friends 9
Figure 8: Distribution of IS and OOS adolescents with Opposite-Sex Friends 10
Figure 9: Perceptions of Peer Behaviors for Sex, Smoking and Alcohol use 10
Figure 10: IS Adolescents Reported Reasons for Missing School 10
Figure 11: OOS Adolescents Reported Reasons for Leaving School 11
Figure 12: IS and OOS Adolescents' Perceptions about People in their Neighborhood 12
Figure 13: IS and OOS Feelings of Neighborhood Insecurity 12
Figure 14: IS Adolescents Emotional Response to Puberty 13
Figure 15: IS and OOS Adolescents' Peer's Response to Friend's Puberty Onset 14
Figure 16: IS Girls Perceived Peer and Personal Reaction to Pregnancy 14
Figure 17: IS Boys Perceived Peer and Personal Reaction to Pregnancy 14
Figure 18 OOS Girls Perceived Peer and Personal Reaction to Pregnancy 15
Figure 19: OOS Boys Perceived Peer and Personal Reaction to Pregnancy 15
Figure 20: IS and OOS Adolescent Gender Norms regarding Romantic Relationships 17
Figure 21: IS and OOS Adolescent Empowerment 18
Figure 22: IS and OOS Adolescent Adverse Childhood Experiences 19
Figure 23: IS and OOS Adolescent Reported Teasing and Bullying 19
Figure 24: IS and OOS Adolescent Health and Puberty Onset 20
Figure 25: IS and OOS Adolescent Body Comfort and Satisfaction 21
Figure 26: IS and OOS Girls Experience with Menstruation 21
Figure 27: IS and OOS Girls Knowledge about Menstruation 22
Figure 28: IS and OOS Adolescents Depressive Symptoms 22
Figure 29: IS and OOS Adolescent Girls Substance Use 23
Figure 30: IS and OOS Adolescents' Knowledge about Pregnancy and HIV 24
Figure 31: IS and OOS Adolescent Engagement in Romantic Relationships and IPV 25
Figure 32: IS and OOS Adolescents Power Imbalance and Intimacy 26
Figure 33: IS and OOS Adolescent Sexual Norms 26
Figure 34: IS and OOS Adolescent Sexual Experiences 27

TABLE OF TABLES

Missingness 32
Survey Quality Indicators 33
Caregiver and Adolescent Survey Match 34
Summary of Sample after Data Cleaning 34
Gender Norms In-school Adolescents 35
Gender Norms Out-of-school Adolescents 36
Sample Description In-school Adolescents 37
Sample Description Out-of-school Adolescents 38

LIST OF ACRONYMS AND KEY PHRASES

AOR	Adjusted Odds Ratio
CBO(s)	Community-based Organizations
CPR	Contraceptive Prevalence Rate
DRC	Democratic Republic of the Congo
ESP	Ecole Nationale de Santé Publique
FP	Family Planning
FTP	First-Time Parent
GBV	Gender-Based Violence
HIV	Human Immunodeficiency Virus
HTSP	Healthy Timing and Spacing of Pregnancy
IPV	Intimate Partner Violence
IRB	Institutional Research Board
IRH	Institute for Reproductive Health, Georgetown University
IS	In School
IUD	Intrauterine Device
JHPSH	Johns Hopkins Bloomberg School of Public Heath
KSPH	Kinshasa School of Public Health
LAM	Lactational Amenorrhea Method
MOE	Ministry of Education
MOH	Ministry of Health
OOS	Out Of School
OR	Odds Ratio
PNSA	Programme National de la Sante des Adolescents (DRC)
SDM	Standard Days Method
SGBV	Sexual and Gender-Based Violence
TFR	Total Fertility Rate
GUG!	Growing Up Great!
USAID	United States Agency for International Development
VYA	Very Young Adolescents

ABOUT THE GLOBAL EARLY ADOLESCENT STUDY

OVERVIEW

The Global Early Adolescent Study (GEAS) is the first global study to explore the process of gender socialization in early adolescence, and how this process informs health and behavioral trajectories for boys and girls throughout adolescence and across contexts.

Instruments

The GEAS survey measures grew out of the voices of adolescents and their parents across the world. Findings from formative qualitative research, including narrative interviews, focus groups and contextual exercises were shaped into a quantitative questionnaire by the global GEAS research network. The resulting measures were subsequently tested for face validity, piloted with 120 adolescents in each of 14 sites globally, and re-piloted with 75 adolescents in a subset of 6 sites. The resulting GEAS survey measure is comprised of three cross-cultural components: a 10-module health instrument, a vignettes-based measure of gender equality and assessment of gender norms. Together, these instruments assess a range of socio-ecological influences at the family, peer, school and neighborhood level, as well as behaviors and outcomes related to adolescent health and wellbeing, including school retention, adolescent empowerment; violence and adverse experiences; mental health, sexuality and sexual health.

Longitudinal Study

The GEAS uses a longitudinal design to assess the relationship between evolving gender norms and a range of key health outcomes across the adolescent period - including sexual health, gender-based violence and mental health - as well as the ways this is influenced by factors at individual, family, community and societal levels. The study will also provide unique insights into how these relationships vary across cultures and between the sexes. In a subset of sites, the GEAS is used in conjunction with a gender transformative intervention to assess shifts in individual gender beliefs and influences on health trajectories over time.

Kinshasa is the first longitudinal site of the GEAS and is operated by the Kinshasa School of Public Health (KSPH) in collaboration with the GEAS Coordinating Center at Johns Hopkins University. The project is jointly funded by the Bill & Melinda Gates Foundation and the United States Agency for International Development (USAID) as part of the global **Passages project**. Passages is a project led by the Institute for Reproductive Health, Georgetown University (IRH) and a consortium of partners including the GEAS, Save the Children, Tearfund and FHI 360. The Passages Project, funded by USAID, aims to transform social norms at scale to promote family planning and reproductive health by testing and evaluating normative change interventions. Under the Passages project, the GEAS serves to evaluate Growing Up GREAT!, an intervention led by Save the Children and it's community-based organization (CBOs) partners to transform reproductive health and gender norms among very young adolescents (VYAs) in Kinshasa.

STUDY SETTING

Coming out of over 3 decades of war, with significant civil strife remaining in some of the eastern and central provinces, the DRC is one of the poorest countries in the world ranking 176 out of 188 on the Human Development Index (UNDP, 2016). The high prevalence of sexual and gender-based violence (SGBV) - 57% of women reported sexual or physical violence at some point in their lives with 27% of those women reporting sexual violence (DHS, 2013-2014) – reveals deep-rooted gender-inequitable attitudes, behaviors and social norms that are predominant across the country. Women's rights are limited in several facets - including access to owning land, restricted civil liberties, minimal participation in the government and the labor force - resulting in women's higher rates of poverty and lower rates of literacy compared to men (Matundu Mbambi & Faray-Kele, 2010; DHS 2013-2014). Furthermore, laws protecting women's physical integrity are not enforced.

Kinshasa, where GUG! and GEAS take place, is the second largest city in sub-Saharan Africa with close to 10 million inhabitants, making up almost 15% of the entire country. More than 50% of the population is under 20 years old. The total population has rapidly expanded in recent years with migration from conflict-affected areas in central and eastern DRC. The city is a complex, challenging and at times violent place to live, with high rates of poverty and unemployment, inequality, and low quality education and health services. However, greater access to and use of services is also apparent: The total fertility rate in Kinshasa is lower than other parts of the country at 4.4 children, and the modern contraceptive prevalence rate is also higher than other provinces at 19% (DHS 2013-2104).

Adolescent fertility in Kinshasa is 13% among 15-19-year-old girls (DHS 2013-2014), and is higher among the poorest adolescents, placing these girls at higher risk of pregnancy-related complications and death. Girls experiencing pregnancy and childbearing are challenged to finish school, imposing a heavy economic burden on themselves and their families. Literacy rates of 15-24 year olds indicate gender inequalities, with girls reporting 73.6% literacy versus boys 91.2% (DHS 2013-2014). In urban Kinshasa, very vulnerable subpopulations – like the 16% of school-age children who are out-of-school – are at even higher risk of sexually transmitted infections (STIs), pregnancy and gender-based violence (GBV) compared to their in-school peers. The communes of Masina and Kimbanseke, where the GUG! intervention and GEAS evaluation take place, represent some of the poorest and challenging environments for both in- and out-of-school youth.

The government has been proactive in supporting youth with a specific department under the Ministry of Health (MOH) for adolescents, le Programme National de la Santé des Adolescents (PNSA), and a national family life education curricula mandated by the Ministry of Education (MOE), although it is still under-resourced and still developing capacities. This results in few younger adolescents able to access good quality, age-appropriate reproductive health information and services.

While it is true that many risks to adolescent reproductive health exist, it is equally true that pro-youth policies and national structures also provide direction, with significant opportunities for substantial improvements in health and well-being, especially if efforts are made to strengthen the foundations of sustainable development, including youth capacity and gender equality.

INTERVENTION

GUG! is a multi-level intervention for VYAs, their parents and caregivers and other influential community members. It uses an ecological approach to provide information and address social and gender norms related to reproductive health and wellbeing at each of these levels, with the goal of improving both in-school

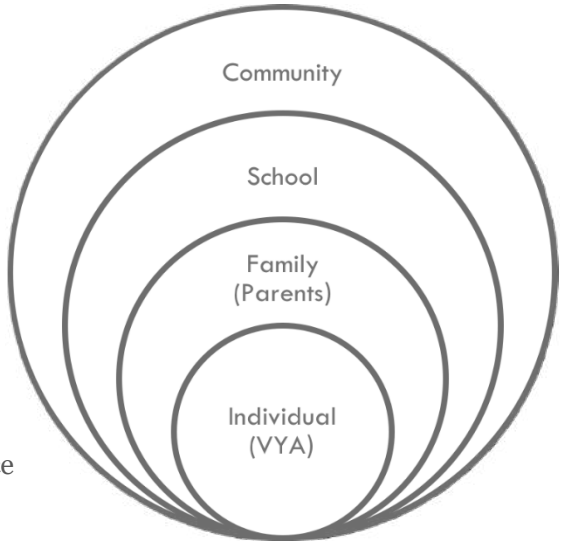
and out-of-school VYAs' sexual and reproductive health outcomes in later adolescence. Specifically, GUG! aims to increase:

1. VYAs' knowledge of puberty and reproductive development
2. VYAs' and parents' gender-equitable behaviors
3. Use of family planning and other reproductive health services among VYAs as they age into older adolescence.

GUG! was informed by other successful approaches for improving gender and reproductive health among adolescents, and it incorporates evidence-based recommendations for health interventions with young people. It purposefully targets VYAs, a critical demographic group, to reach them prior to the onset of puberty. This early intervention is intended to provide an opportunity to shape the health trajectory of an adolescent's life course and proactively prevent reproductive and other health problems, rather than addressing health issues as they arise. It also employs a holistic approach to VYA health interventions, acknowledging the multiple layers of influence from parents, peers, teachers and community leaders.

The intervention package consists of the following components, which reflect the levels of the socio-ecological model shown in **Figure 1**.

Figure 1 | The Socio-Ecological Model



Activities for Very Young Adolescents
Both in-school and out-of-school VYAs participate in weekly meetings of mixed sex groups using a set of interactive materials from the GUG! toolkit (see **Figure 2**) to discuss and reflect on norms. Participating VYAs are grouped into clubs with approximately 25 of their peers. In-school VYAs participate in self-facilitated school-based clubs led by trained VYA leaders, while out-of-school VYAs participate in community-based clubs led by trained facilitators from local community-based organizations. All VYA clubs participate in one session led by a health provider trained in providing adolescent- friendly health services and a visit to the nearest facility to foster health system linkages and reduce stigma.

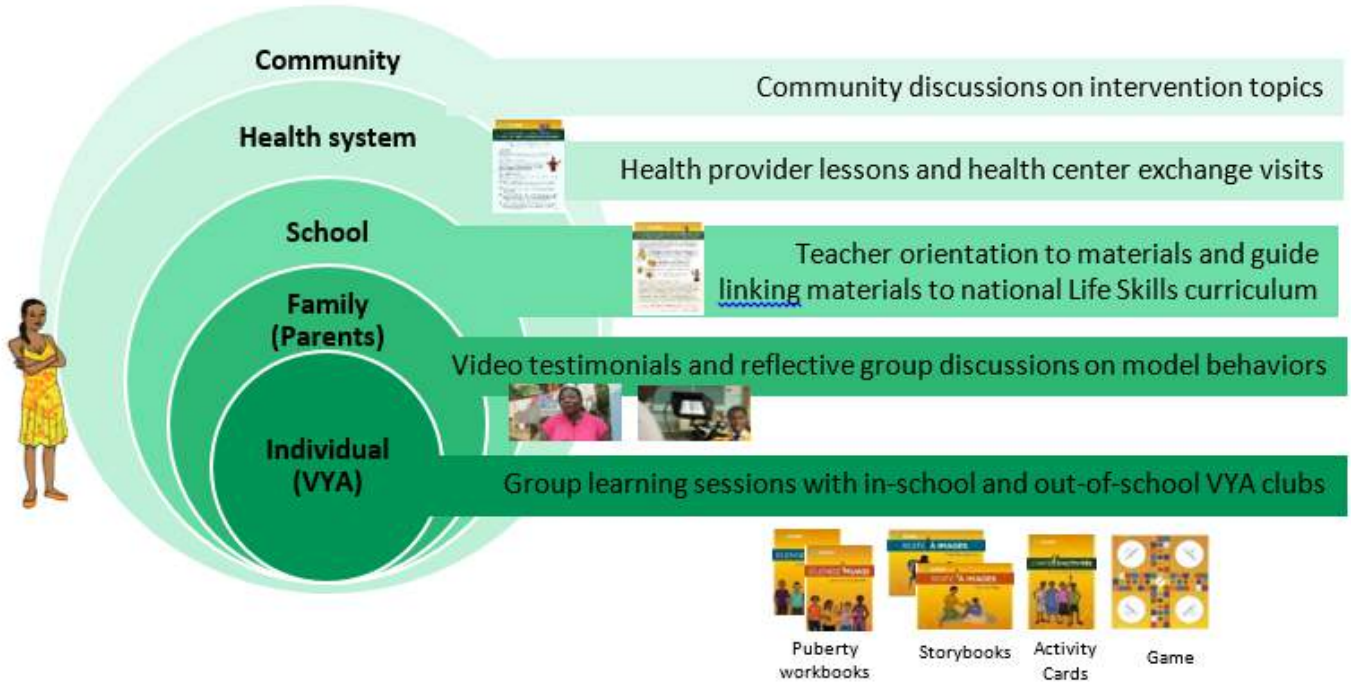
Activities for Parents and Caregivers
Parents of VYA club members participate in a series of guided discussions prompted by six different testimonial videos featuring parents in their communities who have adopted key outcome (target) behaviors related to gender, girls' education and communication about puberty and sexuality. Discussions are led by trained facilitators from CBOs and focus on the social norms underlying and driving health behaviors.

School-based Activities
Teachers and other school officials are engaged in several ways. Three focal point teachers at each school are oriented to the GUG! toolkit and provided with a resource document to help them link activities to the national life-skills curriculum. Teachers also serve as resources for VYA school clubs and mentors for VYA club leaders. School-based activities are intended to have a whole-school reach beyond VYA club members to support diffusion of new ideas and encourage social norm change.

Activities for the Community
Community members are invited to participate in a fun and interactive game to explore norms around VYA health and gender, and to view and reflect on the video testimonials designed for parent sessions. Teamwork and debate during collaborative gameplay and reflections following the

video viewings both provide opportunities for community members to discuss how norms influence behaviors that impact VYAs. An effort is made to include traditional and religious leaders, as well as other influential persons in these activities.

Figure 2 | The GUG! Toolkit



STUDY DESIGN

This project in Masina and Kimbanseke, Kinshasa, combines **1) an observational research study that explores how perceptions of gender norms are co-constructed in early adolescence and how they predict a spectrum of outcomes** and **2) an impact evaluation to assess the effects of the GUG! intervention among early adolescents in Kinshasa**. The longitudinal GEAS in Kinshasa is designed as a quasi-experimental study with an intervention and a control arm, each divided into 2 subgroups, In School (IS) and Out of School (OOS) adolescents.

Study Population

Eligibility criteria
Adolescents were included in the study if they were 10-14 years old at the time of the interview, had given assent to participate in the study, lived in the Masina or Kimbanseke, and if their parents consented to their child's participation in the study.

Sampling
Out of School
Children were recruited using a multi-stage sampling procedure. First, neighborhoods were sampled in the two municipalities using simple random sampling procedure. In each selected neighborhood, OOS adolescents aged 10-14 years old were identified by CBOs in partnership with

Save the Children. The CBOs mapped the OOS adolescents living in the included neighborhoods and established a sampling list. They then narrowed this list to those adolescents who met the following criteria: left school over two years ago, did not expect to be enrolled In School the following year, and did not expect to leave their current neighborhood. Adolescents were then selected from this list by simple random sampling to establish groups of 25 children that were recruited for the intervention.

A similar process was used to recruit the OOS adolescents in the control group. With the help of CBOs, OOS adolescents were identified through the same mapping procedure. In each neighborhood, two separate lists were established by sex, and sorted by age in order to obtain an acceptable age distribution. These lists were numbered and subsequently used to draw a random sample (with backups) using random number generation in Microsoft Excel. The list of selected children was then given to the CBOs to contact parents and adolescents to invite them to participate in the survey. In the event a child and/or parent refused to participate, replacement participants were selected from the backup list. This process was repeated until the required sample size was achieved.

In School
IS adolescents were recruited in the same neighborhoods as OOS adolescents to facilitate follow-up for the intervention groups and avoid contamination across study groups. Save the Children and CBOs conducted a mapping exercise of all schools in neighborhoods within the two selected municipalities that included all primary or secondary schools enrolling adolescents ages 10-14 within each municipality. Schools were grouped into school type (e.g. public, religious, or private). Twenty schools in each municipality were selected using Excel, with the expectation that each school would enroll 25 students in the survey. School leaders were invited to a meeting with the research team to provide an explanation of the survey, and subsequently establish a list of all pupils age 10-14 each in the control and intervention zones. In the event that the list was around or below 25 adolescents, all children were contacted. If a school's list was greater than 25 students, simple random sampling was applied to select 25 participants, divided by sex. The list was given to the school leaders to facilitate contact with participants.

Parents
At the time of parental consent, sociodemographic and household information was also collected from parents. The parental questionnaire took about 15 minutes, and was administered either by themselves or with the help of an interviewer if the parent had difficulty navigating a tablet on their own.

FINDINGS

STUDY POPULATION

Altogether 2,842 adolescents were included in the study and completed the questionnaire. Based on data quality, 10 participants were excluded from the final sample based on the share of survey questions to which they provided no meaningful response (i.e. "Don't know" or "Refuse" responses), or consistent assessment by the interviewer as poor response quality (i.e. poor perceived response accuracy or comprehension). A more detailed description of data quality procedures and excluded cases may be found in Appendix A.

SOCIODEMOGRAPHIC CHARACTERISTICS

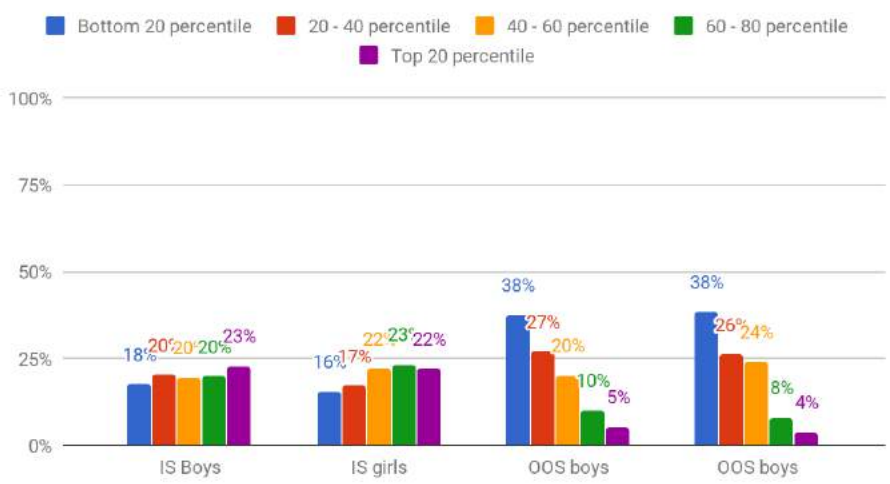
In School Adolescents in Control Group

The median age of IS boys and girls was about twelve (12.08 and 11.97). Most IS adolescents were from the Bakongo and Kwilu-Kwango tribes, which together represented close to 70% of the sample for both sexes. Nearly 9 in 10 adolescents were born in Kinshasa, with no difference by sex. The caregivers of just over half the sample were born in Kinshasa. About half of study participants identified their religion as evangelical Christian (Église de Réveil), with Catholicism following as the next most common religious affiliation (53% and 12%). One-quarter of IS children had a caregiver who was gainfully employed. IS girls on average lived in wealthier households than IS boys as reflected in a difference in wealth quintiles distribution. The literacy rate (proxied by the ability to read a simple sentence) was higher for boys than girls (87% versus 76%, p<0.001)

Out of School Adolescents in Control Group

The age distribution and tribal affiliations of OOS participants for each sex was similar to that of their IS counterparts (median age was just under 12 and participants predominantly identified as either the Kwilu-Kwango or Bakongo tribes). More OOS than IS adolescents identified as evangelical Christian (59%).

Figure 3 | Distribution of In School and Out of School Adolescents by Wealth Quintile



OOS adolescents faced more socioeconomic adversity than IS participants. Fewer OOS adolescents had a caregiver who was gainfully employed (1 in 6 OOS participants vs. 1 in 4 IS participants). OOS participants lived in poorer households compared to those IS, with over two-thirds of OOS VYAs belonging to the two lowest wealth quintiles. OOS participants had drastically lower literacy rates than IS adolescents (89% of IS boys vs. 44% of OOS boys, and 80% of IS girls vs. 39% of OOS girls reporting the ability to read a simple sentence).

Comparison between Intervention and Control Groups

IS adolescents in the intervention group (boys and girls alike) were slightly younger than in the control groups (11.80 versus 12.02). For OOS adolescents, the reverse was true (intervention and control participants had median ages of 12.00 and 11.88, respectively). Tribal affiliation differed between study groups, with greater Kwilu-Kwango representation and a lower proportion of Bakongo representation in the intervention group. The parents of adolescents in the intervention group were more likely to have been born outside of Kinshasa. Systematic wealth differences between intervention and control were also apparent among adolescents. IS adolescents in the intervention arm were overall wealthier than IS controls, while the reverse was true among OOS adolescents. Among IS girls, literacy was higher in the intervention group compared to the control group.

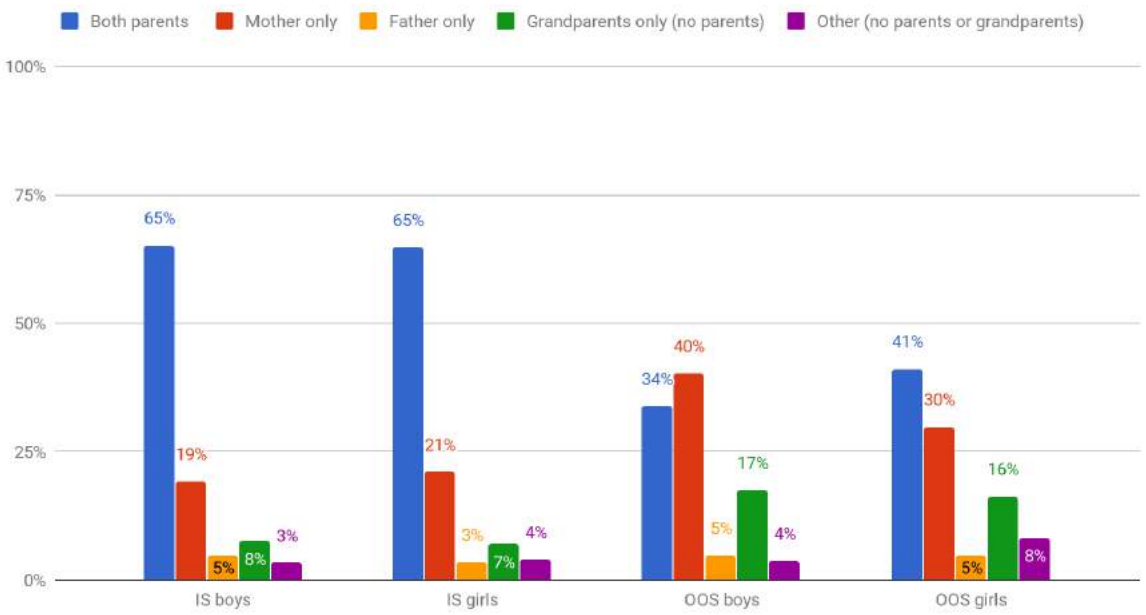
FAMILY STRUCTURE

In School Adolescents in Control Group

Two-thirds of IS adolescents lived in two-parent households, and a quarter lived in single-parent households. One in ten IS adolescents lived with neither parent, but instead with grandparents or other adults. Of the IS adolescents living in single-parent households, the majority lived with their mothers (5 in 6). Close to 80% of adolescents had three or more siblings, and most participants had siblings of both genders (8 in 10).

Adolescents' connectedness with their caregivers was assessed in two questions: 1) whether the adolescent felt close to their caregiver and 2) if the adolescent perceived that their caregiver cared about them. Most (about two-thirds) IS participants reported feeling close with their caregivers. A higher percentage of girls than boys (60% versus 52%) felt their caregiver was aware of who their friends were, their movements and their grades, indicating more caregiver monitoring of girls compared to boys. Adolescents were also asked about their caregiver's aspirations for their future. Eight out of ten IS adolescents thought their caregivers expected them to achieve a graduate degree and three quarters thought their caregivers expected them to marry after high school, with no differences by gender.

Figure 4 | IS and OOS Parental Structure



Out of School Adolescents in Control Group

OOS adolescents faced substantially more adversity in their living circumstances than their IS peers. Only 33% of OOS boys and 37% of OOS girls were living with both parents. Nearly double the proportion of OOS adolescents lived with grandparents or other relatives (24%), and in single-parent households (39%) compared to their IS counterparts, the majority of whom were living with their mothers). Family size and sibling composition were similar between OOS adolescents and IS adolescents.

Caregiver connectedness was lower among OOS adolescents relative to IS adolescents. Differences in close caregiver monitoring between OOS and IS girls was particularly striking (71% versus 58%).

As a result, gender differences between OOS adolescents were greater than among IS adolescents for both indicators of caregiver connectedness and monitoring. Perceptions of caregiver expectations also differed between OOS and IS adolescents, with a lower percentage of OOS adolescents (66% of boys and 56% of girls) indicating their caregiver expected them to achieve a graduate degree. More OOS than IS adolescents thought their caregiver expected them to marry before completing high school (24% of boys and 30% of girls OOS compared to 12% and 17% of IS boys and girls). Perceived caregiver expectations differed by gender among OOS adolescents with higher educational aspirations for boys and earlier marital expectations for girls.

Figure 5 | IS and OOS Perceived Caregiver Education Expectations

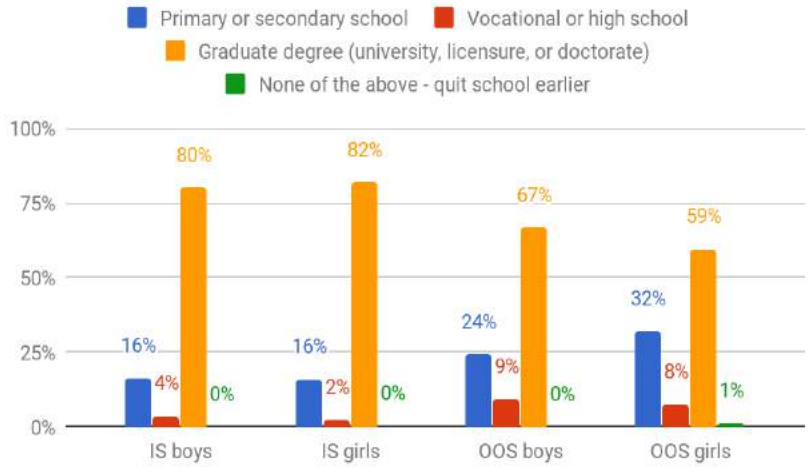
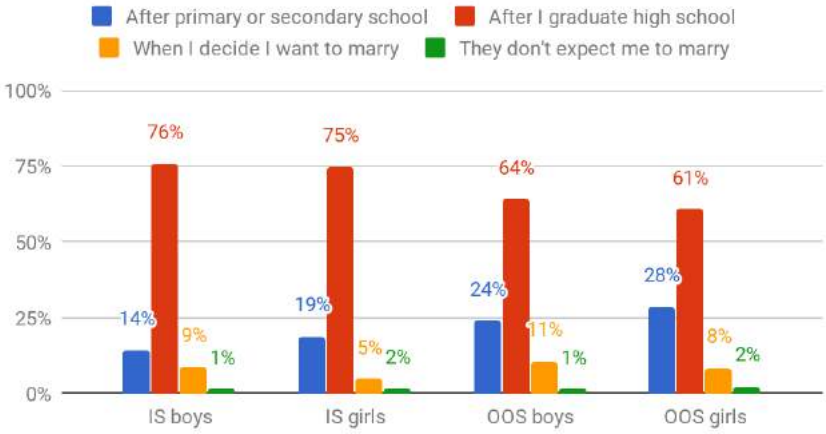


Figure 6 | IS and OOS Perceived Caregiver Marital Expectations



Comparison between Intervention and Control Groups

Family structure was similar among intervention and controls, both for IS and OOS samples, although OOS boys in the intervention group tended to have more siblings than in the controls. Sentiments of caregiver connectedness were lower among IS boys in the intervention group relative to the controls and caregiver monitoring was lower for IS girls in the intervention group relative to

the controls. These group differences were not apparent among OOS adolescents however OOS boys in the intervention group reported lower caregiver expectations for their education than the controls.

PEERS

In School Adolescents in Control Group

A majority of adolescents reported friendships predominantly within their own sex, with 61% of IS girls reporting no male friends and 53% of IS boys reporting no female friends. IS boys reported slightly larger peer networks than IS girls (32% of girls had more than 3 female friends versus 39% of boys reporting more than 3 male friends), while more IS girls indicated having no same sex friends (7%) as compared to IS boys (3%). IS Boys spent more time with their friends than IS girls (59% indicated seeing their friends every day versus 40% of girls)

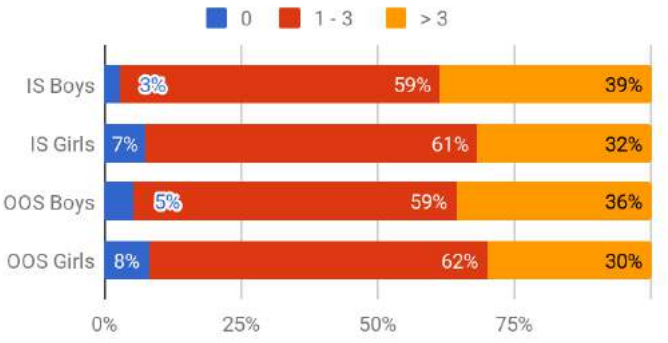
Descriptive norms, as assessed by adolescents' beliefs about their friends' behaviors, differed substantially by sex for IS adolescents. A greater percentage of IS boys than girls believed any their friends had ever smoked (6% versus 3%) or had ever drank alcohol (13% versus 8%) than IS girls. IS boys were also more likely to indicate that any of their friends had ever had sexual intercourse relative to IS girls (14% versus 7%). More than 60% of IS adolescents thought studying was important to their friends, 47% of IS boys and 36% of IS girls thought that being popular was important to their friends, and only a minority believed their friends thought having a boy/girlfriend or having sex was important to them. IS boys were more likely than IS girls to report friends' motivations' for being popular, having a girlfriend or having sex.

Out of School Adolescents in Control Group

Peer structure was similar between OOS and IS boys, while OOS girls were less likely to have male friends (25%) than IS girls (39%). OOS boys spent more time with their friends than IS boys, with a greater gender gap among OOS adolescents than between IS boys and girls (73% of OOS boys saw their friends on a daily basis versus 54% of girls).

A number of differences between OOS and IS adolescents emerged concerning peer behaviors. A greater percentage of OOS boys thought their friends smoked than IS boys (11% versus 6%) and a higher percentage of OOS girls thought some of their friends had ever had alcohol as compared to IS girls (14% versus 8%). OOS girls were also more likely than IS girls to report their friends had ever had sexual intercourse (13% versus 7%). Fewer OOS adolescents (as compared to IS adolescents) believed studying hard was important to their friends or that being popular was important. A minority of OOS adolescents thought having boy/girlfriends was important to their friends, although more OOS girls than IS girls reported this was true (9% versus 5%).

Figure 7 | Distribution of IS and OOS adolescents with Same-Sex Friends



Comparison between Intervention and Control groups

Differences between the intervention and control groups were observed in the time boys spent with friends, which was significantly lower in the intervention group compared to controls for both IS and OOS adolescents. The same was not true for girls. Among IS boys and girls, more adolescents in the intervention group versus control group believed most or all their friends thought it was important

to study hard. Finally, more IS girls in the intervention group believed their friends had had sexual intercourse relative to IS girls in the control group.

Figure 8 | Distribution of IS and OOS adolescents with Opposite-Sex Friends

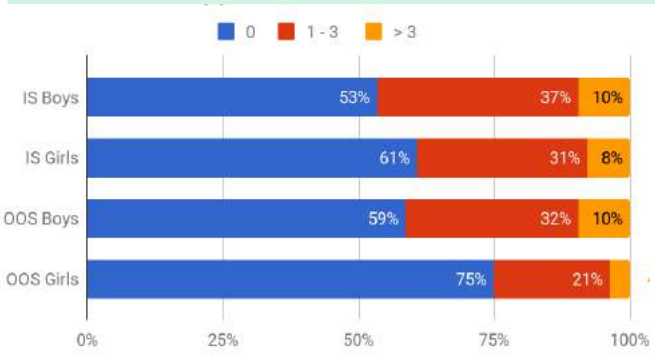
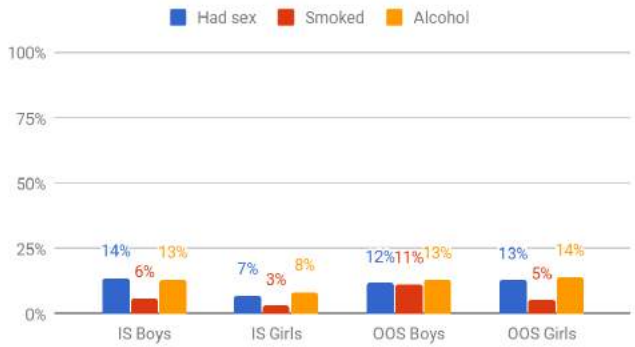


Figure 9 | Perceptions of Peer Behaviors for Sex, Smoking and Alcohol use

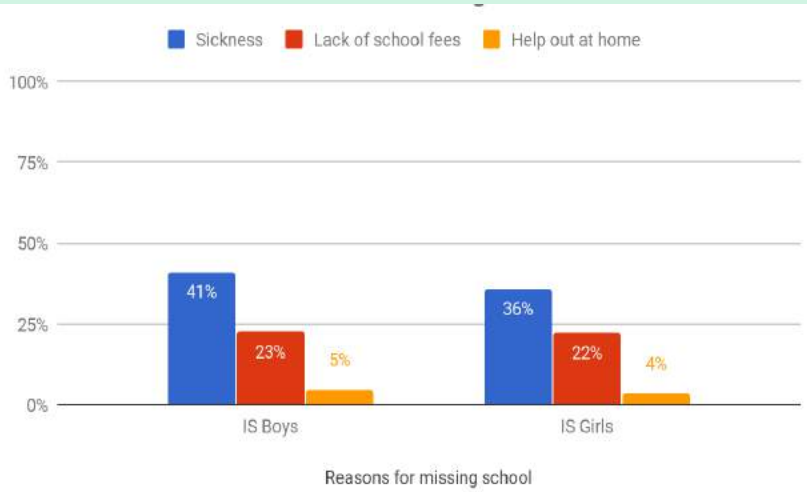


SCHOOL

In School Adolescents in Control Group

IS adolescents were enrolled in primary or secondary school, ranging from 4th primary up to 4th secondary grade levels. Altogether, 60% of adolescents were in primary school and 40% in secondary, with no difference by sex. Approximately 4 in 10 adolescents were attending public schools, 34% of boys and 41% of girls were attending religious school and a quarter of boys and 14% of girls were in private non-religious schools. School resources related to water and sanitation (latrines, running water and soap), sport activities and technology (computers) were generally low with 48% of girls and 46% enrolled in schools with poor infrastructure or resources while 27% of boys and 30% of girls were enrolled in schools with high levels of resources.

Figure 10 | IS Adolescents Reported Reasons for Missing School

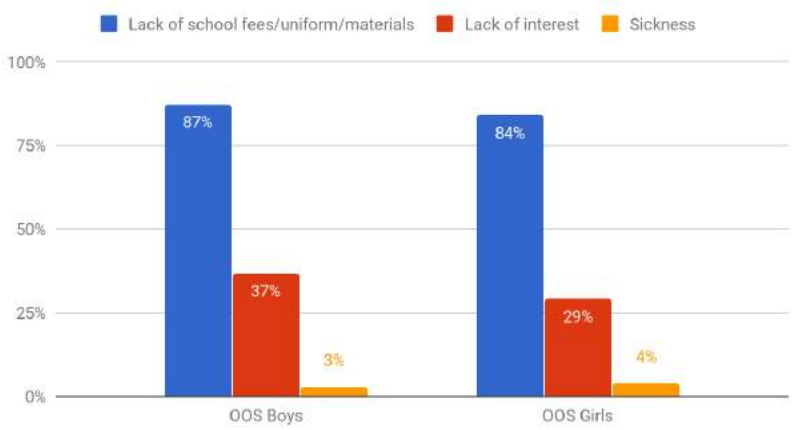


Boys on average missed more school in the past month than girls (18% vs. 14% reported missing 5 or more days of school in the past month). Students most often missed school because of sickness (63% for both boys and girls who missed any school, respectively). No differences were detected between boys and girls for other reasons for missing school, except for hanging out with friends (10% of boys and 4% of girls who missed any school, p=0.008).

Out of School Adolescents in Control Group

Only a small minority of OOS adolescents, (7% of girls and 5% of boys) had never been to school. Half had completed 4th grade primary school, while a little more than a quarter had attended secondary school. Altogether, 18% of girls and 15% of boys had left school more than 3 years before the survey, while more boys (19%) than girls (10%) had left school recently (less than 1 year ago). More than 8 out of ten adolescents had dropped out of school for economic reasons (lack of school fees/ uniform)

Figure 11 | OOS Adolescents Reported Reasons for Leaving School



Comparison between Intervention and Control Groups

A greater proportion of OOS boys in the intervention group had never been to school relative to controls, and OOS boys and girls alike in the intervention group were more likely to have left school for lack of school fees relative to controls.

NEIGHBORHOOD

Adolescents' perceptions of their neighborhood were captured through a series of questions exploring neighborhood social cohesion, danger in the neighborhood and neighborhood social control. Neighborhood social cohesion related to perceptions of mutual trust and solidarity between people living in the same locality and was assessed with four questions about trust, familiarity, care and solidarity in the neighborhood. Perceptions of neighborhood safety related to young people's feelings about being threatened or unsafe at school, on their way to school or in their neighborhood. Neighborhood social control related to young people's expectations for adults to intervene for the common good of their communities.

In School Adolescents in Control Group

Measures related to neighborhood social cohesion indicate that a vast majority of IS boys and girls felt connected with people in their neighborhood and believed people in the neighborhood interacted positively with each other. Boys were more trusting of their community members than girls (60% of boys versus 43% of girls IS reported people in their neighborhood could be trusted) and more likely to believe people in their neighborhood cared about them (51% versus 37%). Nine out of ten adolescents generally believed adults in the neighborhood would act for the greater good of the community by intervening in case of fighting or disruption in their neighborhood. However, a significant fraction of adolescents had felt threatened in the neighborhood or on their way to school in the last 12 months, mostly by adults or teachers or by adolescents of their age. IS boys were also more likely to report feeling threatened in the last 12 months than IS girls (32% versus 23%), but girls on the other hand were more likely to report feeling unsafe in their neighborhood at the time of the survey (32% versus 25%). Three quarters of adolescents felt they had someone to turn to when they felt unsafe.

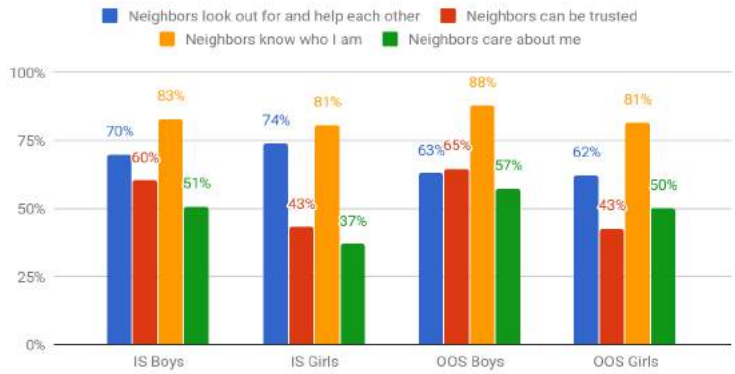
Out of School Adolescents in Control Group

Perceptions of neighborhood cohesion were slightly higher among OOS adolescents as compared to IS adolescents, while there were no differences in terms of neighborhood social control. OOS felt more threatened in their neighborhood than IS adolescents, although feelings of current unsafety were similar. OOS adolescents were also less likely than IS adolescents to indicate that there was someone they could turn to when feeling unsafe.

Comparison between Intervention and Control Groups

There were no systematic differences in perceptions of neighborhood cohesion, safety or social control between intervention and control groups.

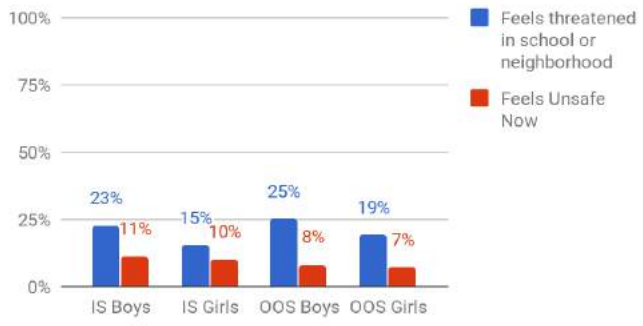
Figure 12 | IS and OOS Adolescents' Perceptions about People in their Neighborhood



VIGNETTES-BASED MEASURE OF GENDER EQUALITY

The GEAS developed vignettes to assess gender differences in communication style and adolescents' perceptions regarding puberty and pregnancy. Vignettes were designed to investigate how adolescents would perceive relationships and adolescent experiences differently if the protagonist was a boy or a girl and how they assessed their own attitudes or behaviors relative to what they perceived as being typical in their peer groups and with other social influencers. The first vignette assessed communication style in the context of romantic relationships between boys and girls, including direct, indirect and non-communicative (avoidance) strategies, coded 2, 1, or 0 respectively to form a communication score. The second vignette explored reactions to gender atypical behaviors distinguishing between exclusion, partial inclusion and complete inclusion coded 0, 1, or 2 respectively. Puberty vignettes evaluated young adolescents' responses to puberty onset with taking perspectives of hypothetical protagonist and peers. Pregnancy vignettes assessed adolescents' responses to pregnancy in both respondents' and protagonists' views.

Figure 13 | IS and OOS Feelings of Neighborhood Insecurity



In School Adolescents in Control Group

Adolescents generally adopted an indirect style of communication to approach romantic interests, with girls more likely to engage in indirect/avoidance style than boys. Specifically, girl respondents indicated 72% of boys would directly approach a girl to indicate his romantic interest but

that in the same situation, only 58% of girls would do the same. The same perceptions of gendered communication styles in relations was reported by boy respondents who indicated that 67% of boys would directly communicate their romantic interest to a girl, versus 65% of girls who would do the same with a boy. When asked about their personal behaviors in this type of situation, 63% of boy respondents indicated they would directly communicate with a girl they liked versus 52% of girl respondents who would do the same with a boy they liked.

Similar sex differences in typical behaviors were captured in the assessment of young peoples' reaction to atypical gender behaviors with 70% of boy respondents indicating that atypical boys would be rejected by girls if asking to join an all-girls group versus 71% of atypical girls who would be rejected if asking to join an all-boys group. Girls' responses were similar with 80% indicating atypical boys would be rejected for asking to join an all-girls group versus 64% of atypical girls asking to join an all-boys group.

IS boys were more likely to indicate typical body satisfaction towards puberty onset than girls (65% vs. 57%) and one quarter of both sexes indicated boys and girls alike (17% vs. 24%) were embarrassed about their body changes with puberty. A minority of adolescents believed boys and girls in their communities felt sad about puberty onset (8% vs. 10% respectively) or considered pubertal body changes abnormal. In terms of peers' views, nearly one third of boys and girls (33% vs. 36%) thought peers generally considered body changes as normal and would not pay more attention to a friend undergoing these changes. Another one third (36% vs. 42%) indicated peers were generally embarrassed when friends go through body changes. Only 15% boys and 7% girls said that peers encouraged starting relationships when entering puberty.

Figure 14 | IS Adolescents Emotional Response to Puberty

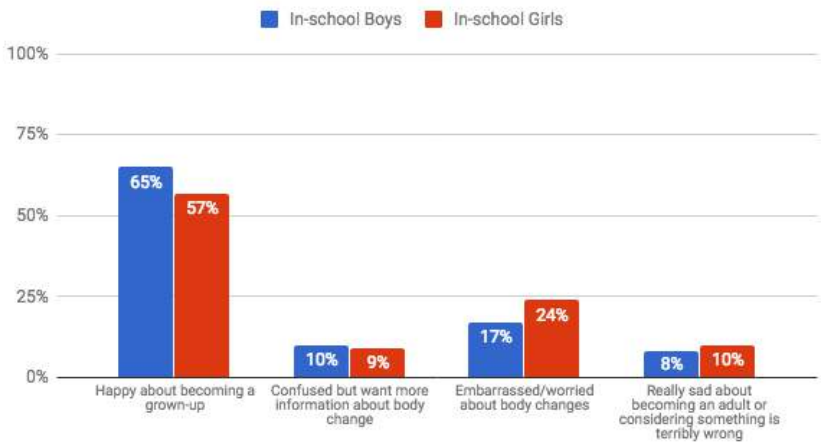
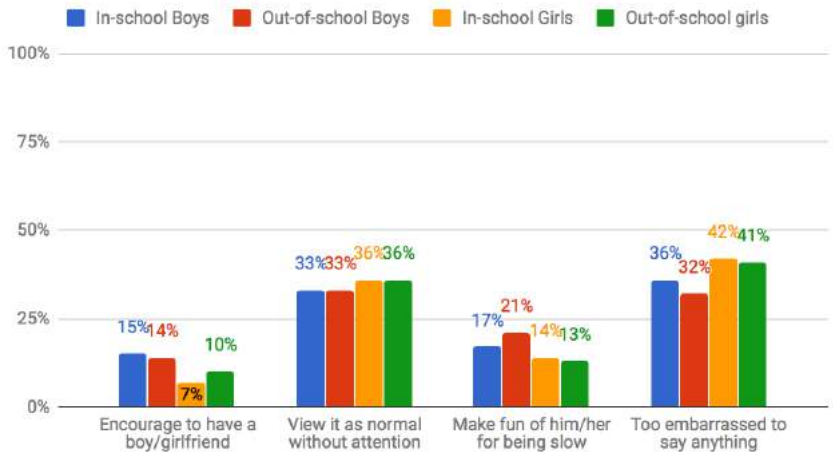


Figure 15 | IS and OOS Adolescents' Peer's Response to Friend's Puberty Onset



Adolescents are also asked to describe typical reactions to an adolescent girl becoming pregnant in their communities, as well as their own response to this hypothetical situation. Most adolescents, boys and girls alike, would accept the pregnancies, with 45% of girls reporting a teenage girl who becomes pregnant would be happy to have a baby with her boyfriend while 41% of boys indicated a boy whose girlfriend became pregnant would be happy to have a baby with her. However, when asked how the respondent would personally react to the situation, the percentage of accepting boys increased to 53%, suggesting potential social desirability bias when assessing personal attitudes and behaviors. Social desirability bias was also made clear by the difference in decisions to terminate pregnancies that were systematically higher when considering typical cases (28% for girls and 38% for boys) than when considering personal decisions (19% of girls and 26% of boys)

Out of School Adolescents in Control Group

Modes of communication were similar between IS and OOS adolescents while OOS adolescents were less likely to believe their peers would be accepting of gender atypical behavior. Adolescents' attitudes regarding puberty onset were comparable between IS and OOS adolescents. Peers' responses to friends' puberty onset were similar to those among IS adolescents.

Figure 16 | IS Girls Perceived Peer and Personal Reaction to Pregnancy

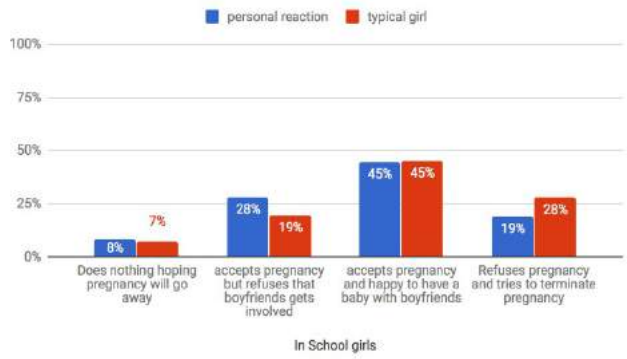
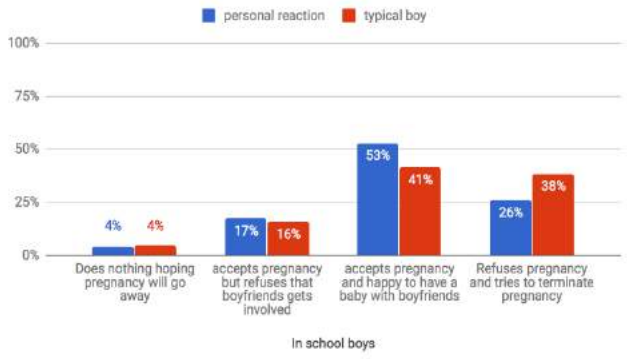


Figure 17 | IS Boys Perceived Peer and Personal Reaction to Pregnancy



OOS girls were more likely than IS girls to indicate a teenage girl who becomes pregnant would consider abortion (37% OOS versus 28% IS girls) and conversely that they would be happy to have a baby with their boyfriend (36% OOS versus 45% IS). OOS boys were less likely than IS boys to indicate the pregnancy would be terminated (30% OOS boys versus 38% IS boys). As observed with IS, there was evidence of social desirability bias with a lower percentage of respondents indicating they would consider pregnancy termination as compared to typical adolescents faced with this situation.

Figure 18 | OOS Girls Perceived Peer and Personal Reaction to Pregnancy

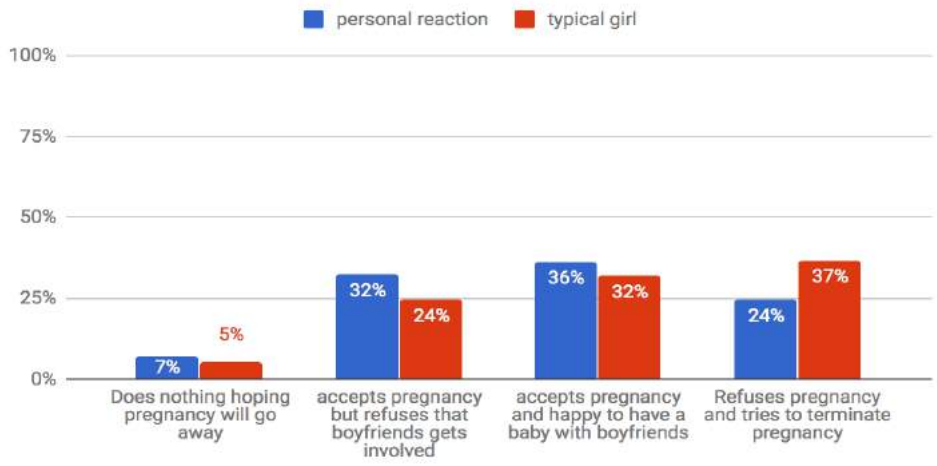
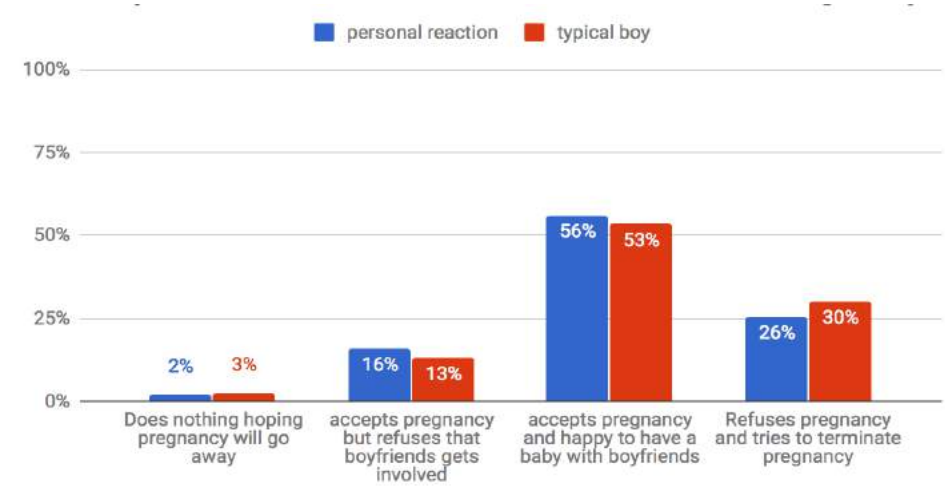


Figure 19 | OOS Boys Perceived Peer and Personal Reactions to Pregnancy



Comparison between Intervention and Control Groups

There were no differences between the intervention and control groups with the exception of IS boys who were more likely to believe peers would be accepting of atypical gender behaviors, and both IS and OOS boys from the control group were more likely to have a positive attitude about pubertal body changes in comparison to those from intervention group correspondingly (65% vs. 55% and 62% vs. 54%).

GENDER NORMS

The GEAS aims to investigate young people's perceptions of normative gender traits, roles and relationships in early adolescents and how these perceptions evolve over time and influence a number of adolescent health outcomes. The exploration of gender-stereotypical traits reflects attributes of masculinities and femininities, contrasting male toughness and female vulnerability, while gender stereotypical roles portray sex-specific responsibilities and power imbalance in decision making in the household. In addition, two cross-cultural measures of gender norms about relationships were developed, assessing normative views about boy-girl romantic engagement (heterosexual normative relationship scale) and the existence of a "sexual double standard" with respect to the social consequences of engaging in romantic relations. The distribution of responses to each of the questions populated the 2 scales are presented in **Appendix II.**

Gender-Stereotypical Traits and Roles

In School adolescents in control group
About three quarters of IS boys and girls agreed with gender stereotypical traits contrasting boys' toughness to girls' vulnerability, with no systematic difference by sex. A vast majority of IS adolescents considered girls were expected to be humble and in need of protection, while boys were expected to be strong and fight for themselves. In addition, a vast majority of IS adolescents endorsed stereotypical gender roles in which men were expected to be the head of households and women subordinate to men. More than 90% of IS adolescents believed that women should obey their husbands in all matters, with no difference by sex. Adolescents recognized the sanctions for challenging these stereotypical norms, especially boys. 74% of boys and 66% of girls agreed it was appropriate to tease boys if they acted like girls. Sanctions for girls behaving like boys were slightly less prominent with 68% of boys and 59% of girls agreeing that is was ok for girls to be teased if they acted like boys.

Out of School adolescents in control group
Endorsement of stereotypical traits of toughness versus vulnerability were similar between OOS and IS adolescents. A majority of OOS adolescents also agreed with men's superior status in the family and were slightly more likely than In School adolescents to consider men had financial responsibility for the family. While most OOS adolescents supported the idea of teasing their peers if they acted like the opposite gender, OOS boys were less likely than IS boys to adhere to this notion, while the reverse was true for OOS girls.

Comparison between intervention and control groups
Responses were generally comparable for all three domains between control and intervention group with a few exceptions. IS boys in the intervention group were less likely than controls to believe girls needed more parental protection and that it was acceptable to tease a boy/girl who acted like the opposite gender. OOS boys in the intervention group were less likely to believe girls should be humble than in controls.

Gender Norms about Relationships

The heterosexual normative relationship scale is based on 5 questions with summary score ranging from 1 to 5: the higher the score the more adolescents perceive relationships between boys and girls to be normative at their age. The sexual double standard scale addresses perceptions of unequal social status or sanctions related to romantic relationships for boys and girls, with boys gaining social status for having girlfriends while girls risk their social reputation for having boyfriends. The

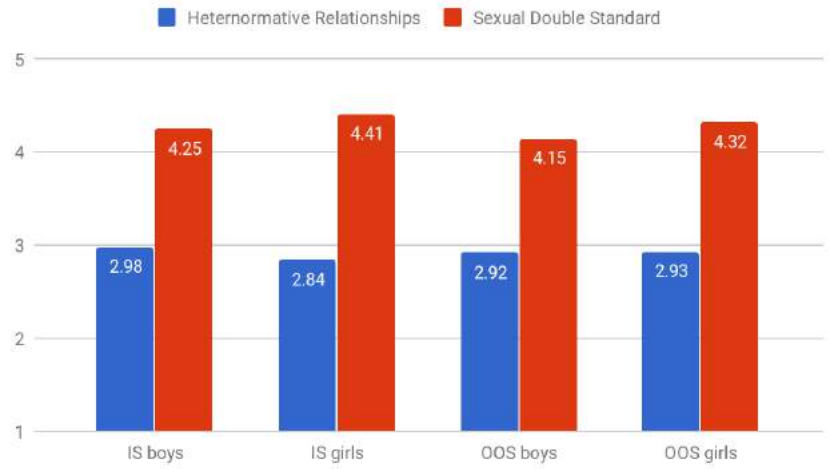
summary score ranges from 1 to 5, the higher score the greater endorsement of the sexual double standard.

The distribution of responses to each of the questions populated the 2 scales are presented in **Appendix II.**

In School Adolescents in Control Group
With a median score of 2.84 for girls and 2.98 for boys out of 5, results suggest nuanced perceptions about romantic involvement during adolescence, bending towards marginal disapproval, especially for girls. Scores for the sexual double standard scale were much higher, suggesting strong endorsement of the sexual double standard reflecting positive social gains for boys who engage in relationships versus harmful consequences for girls who engage in such relations.

Out of School Adolescents in Control Group
Perceptions of gender norms among OOS adolescents were very consistent with their IS peers, although tended to be slightly more permissive about romantic relationships for girls and less adherent to the sexual double standard for both genders.

Figure 20 | IS and OOS Adolescent Gender Norms regarding Romantic Relationships



Comparison between Intervention and Control Groups
There were no systematic differences in perceptions of gender norms between intervention and control groups, with the exception of IS boys in the intervention group who were less likely to think that boy/girl relationships were normative compared to controls.

EMPOWERMENT

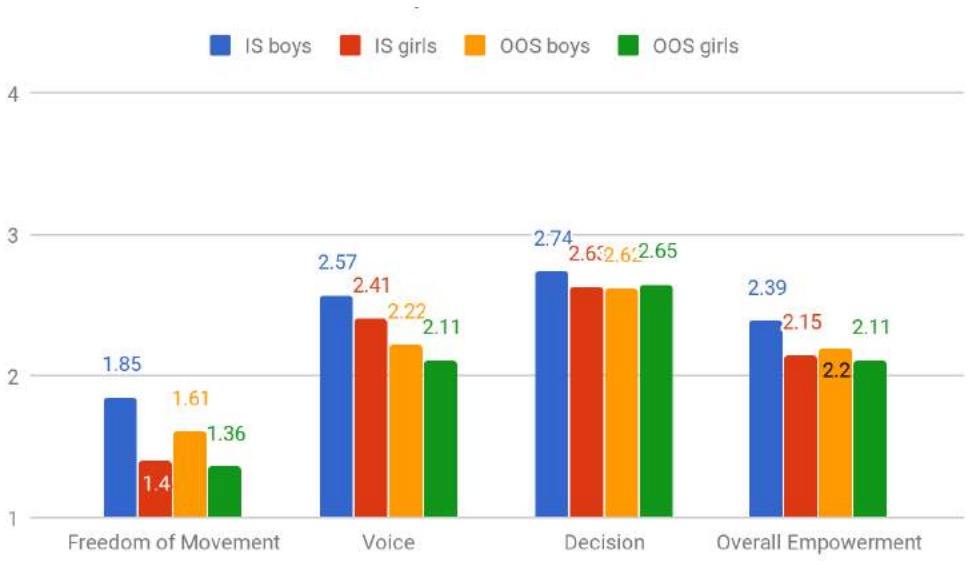
The GEAS explores three dimensions of empowerment in early adolescence related to freedom of movement, voice, and decision making. Freedom of movement captures the extent to which adolescents are free to go to certain places alone (e.g. after-school activities, party, meeting with friends with opposite sex, and community center/movies). Voice represents the extent to which adolescents believe their opinions are heard by their parents, teachers, or adults in the community. Decision represents the extent to which adolescents can make daily life decisions on their own, such as friendships, clothing, what to do with their free time, foods to eat when outside home etc. The series of questions underlying each construct are presented in **Appendix II**. Each sub

dimension score ranges from 1 to 4, with higher scores reflecting greater empowerment. The overall empowerment indicator was an aggregate score ranging from 1 to 4 reflecting all three sub dimensions of freedom of movement, voice, and decision ranging from 1 to 4.

In School Adolescents in Control Group
Differences emerged in overall empowerment scores between genders, IS boys scoring higher than IS girls (2.39 versus 2.15). IS boys were more empowered than IS girls in all three dimensions, but the greatest difference related to freedom of movement. In general, IS adolescents were less likely to believe they had freedom of movement, as compared to having their voice heard or having decision making power.

Out of School Adolescents in Control Group
Empowerment scores for OOS adolescents were not exactly comparable to IS adolescents, as questions related to school (freedom to go to school and having voice heard at school) were not salient for OOS adolescents. Nevertheless, patterns of empowerment by gender among OOS adolescents were similar to IS adolescents, with higher freedom of movement and voice scores for boys compared to girls. Conversely, OOS girls had a slightly higher decision-making score than boys. In general, OOS boys and girls alike scored lower than IS adolescents on all three dimensions, with the exception of decision making for OOS girls.

Figure 21 | IS and OOS Adolescent Empowerment



Comparison between Intervention and Control Group
IS girls in the intervention group scored substantially higher on their ability to voice their opinion and participate in decisions compared to the control group. These differences did not transpire for boys or OOS girls.

ADVERSE CHILDHOOD EXPERIENCES, BULLYING & VIOLENCE

The GEAS explores a number of dimensions related to child adverse experiences in the past, as well as experiences of bullying and physical interpersonal violence in the present. In an attempt to estimate poly-victimization, adverse child events were considered in an additive measure, counting the number of lifetime experiences of adverse events. We also evaluated the incidence of psychological and physical bullying in the last 6 months, as well as violence perpetration in the last 6 months.

In School Adolescents in Control Group

A vast majority of IS adolescents had experienced any adverse child event, with greater exposure of IS boys than IS girls (79% versus 69%). Most IS adolescents reported one or two adverse events, but 32% of IS boys and 28% of IS girls reported three or more events. Teasing and physical bullying in the last 6 months were substantially more common among IS boys than IS girls, with 43% of boys versus 26% of girls having been teased on the last 6 months and 26% of boys and 16% of girls reporting having been physically bullied during the same time period. A little less than a third of IS adolescents, boys and girls alike had intervened after witnessing their peers being bullied. A very small minority of IS boys reported carrying a weapon for self-defense.

Out of School Adolescents in Control Group

OOS adolescents were more likely to report adverse child events than IS adolescents, especially girls, who were 86% to report at least one adverse event. Half of the OOS girls reported three or more adverse events versus 40% of OOS boys. Teasing in the last 6 months was less common among OOS boys compared to their IS peers but more common among OOS girls compared to IS girls, resulting in smaller gender differences among OOS adolescents than their IS peers. Physical violence (both victimization and perpetration) were similar between IS and OOS boys but more common among OOS than IS girls. Finally, OOS adolescent boys were less likely than IS boys to intervene when witnessing bullying of a friend while no difference emerged between IS and OOS girls.

Figure 22 | IS and OOS Adolescent Adverse Childhood Experiences

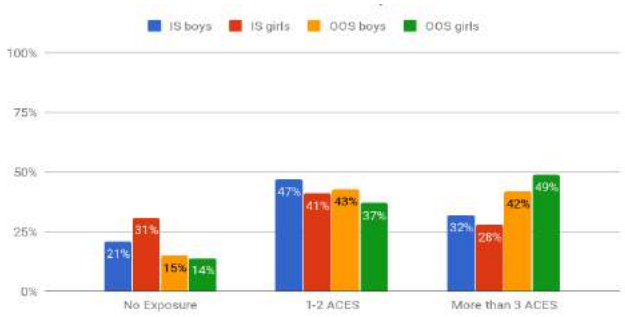
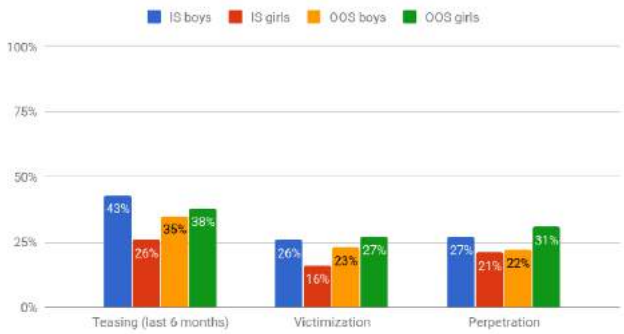


Figure 23 | IS and OOS Adolescent Reported Teasing and Bullying Experiences



Comparison between Intervention and Control Groups

Few significant differences emerged between intervention and control groups regarding child adverse experiences, teasing, and bullying or violence perpetration. IS girls in the intervention group were more likely to be teased than controls. Boys in the intervention group (both IS and OOS) were more likely to have experienced physical bullying and OOS boys in the intervention group were more likely to perpetrate violence than controls.

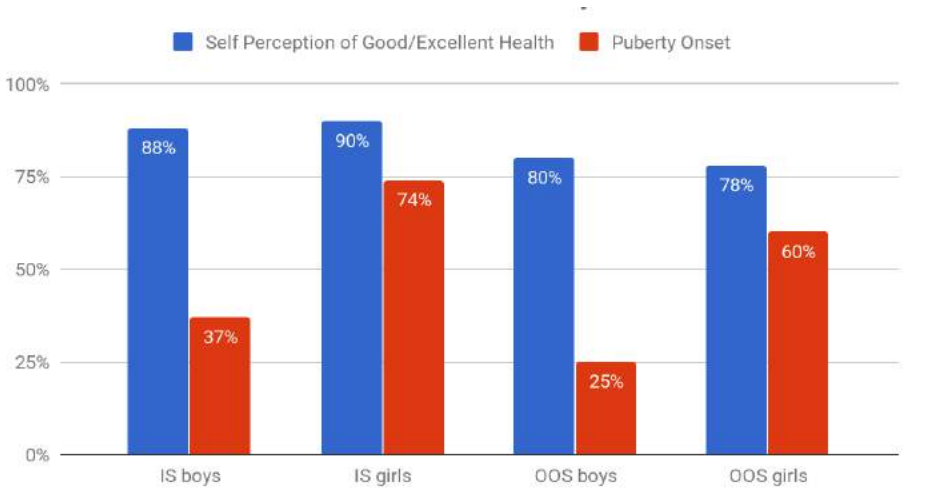
OVERALL HEALTH AND BODY COMFORT

Adolescents were asked questions about their perceptions of their general health, their comfort with their own body, and their stages of pubertal development. Pubertal onset was measured by asking boys and girls if they had started puberty and by asking girls about breast development and menstruation, and boys about voice change and facial hair development. A total of eight questions assessed young people's level of comfort with their own bodies. These questions were summarized in a single indicator assessing the percentage of adolescents that felt satisfied with their body image.

In School Adolescents in Control Group

Close to 90% of IS boys and girls considered themselves to be in good health. Three quarters of IS girls had experienced pubertal onset while this was the case for 37% of IS boys. Nine in ten IS adolescents expressed positive attitudes about their body image (satisfied or liked the way they looked, felt beautiful/ handsome) although 44% and 38% of IS boys and girls wished their bodies were different and 40% of boys and 34% of girls indicated they were worried their bodies were not developing normally. Altogether, only 38% of IS girls and 32% of IS boys had consistent positive feelings about their bodies across all assessment items.

Figure 24 | IS and OOS Adolescent Health and Puberty Onset



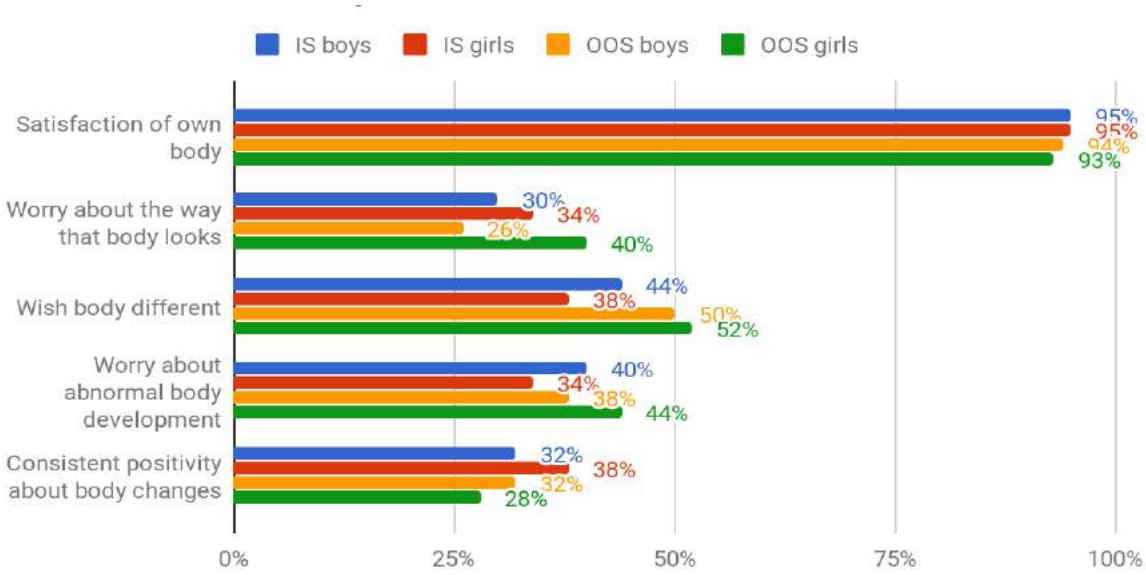
Out of School Adolescents in Control Group

Perception of adolescents' own-health was lower among OOS relative to IS adolescents, with eight out of ten OOS adolescents (80% boys and 78% girls) indicating being in good health (versus 88% of boys 90% of girls IS). OOS adolescents were also less likely to have experienced pubertal changes. Body comfort was similar between IS and OOS boys but lower for OOS girls compared to IS girls. Half of OOS boys and girls indicated they often wished their bodies were different and 44% of OOS girls indicated they were worried about their bodies not developing normally (versus 34% of IS girls). Only 28% of OOS girls had consistent positive feelings about their bodies (versus 38% of IS girls) while there was no difference between IS and OOS boys with 32% of consistent positive feelings.

Comparison between Intervention and Control Groups

IS girls in the intervention group were more likely to have experienced pubertal changes (79% vs. 74%), and OOS boys and girls in the intervention group had lower body comfort scores than the Out of School controls.

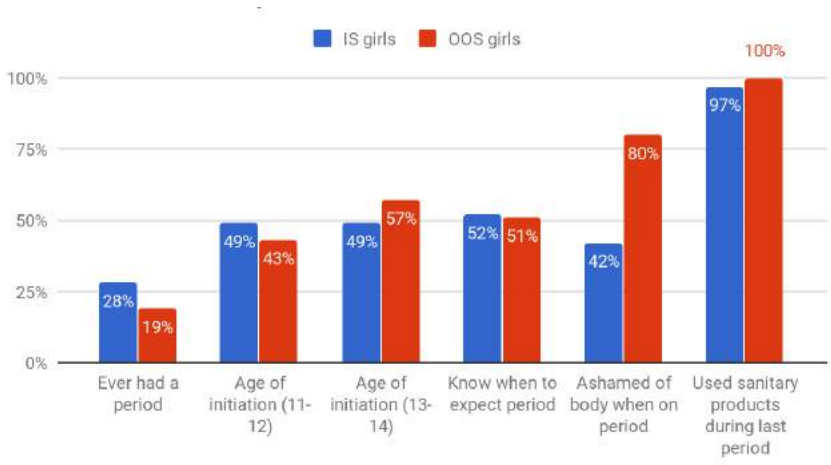
Figure 25 | IS and OOS Adolescent Body Comfort and Satisfaction



MENSTRUATION

In addition to body comfort, the GEAS included questions about girls' experience with menstruation and menstrual hygiene. Four dimensions were explored: knowledge, feelings about menstruation, experience (e.g. age at first menstruation, menstrual management), and self-care during menstrual cycles.

Figure 26 | IS and OOS Girls Experience with Menstruation



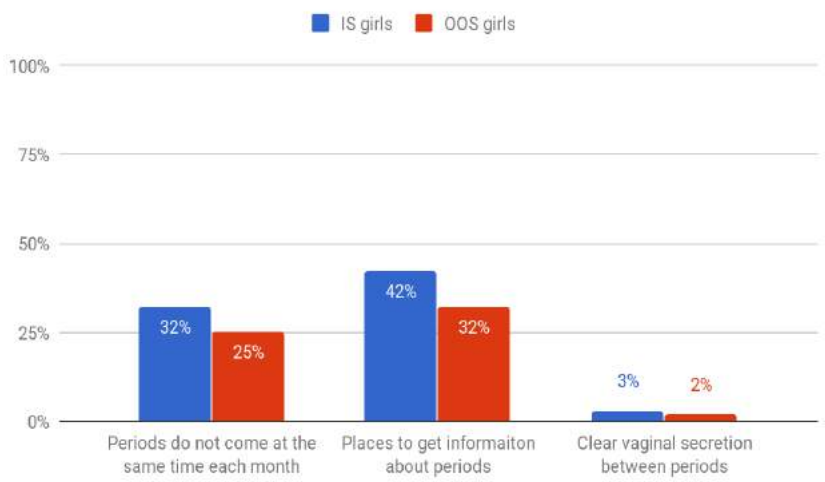
In School Girls (control versus intervention)

28% of IS girls had ever had a period, with age of onset equally divided between 11-12 and 13-14 years. IS girls' knowledge and sources of information about the menstrual cycle was limited, with a third understanding periods could come at irregular times, 42% knowing where to find information about menstruation and only 3% aware of the physical signs of ovulation. While a vast majority of IS girls associated menstruation with becoming a woman, expressed pride about their period and indicated periods were not a major concern for them, a majority also felt it was important to keep it secret and 40% felt shame over their bodies when they had their periods. More than 9 out of 10 IS girls had talked to someone about how-to take care of themselves during period cycles. More than 9 in 10 girls had used sanitary products and 17% had missed school the last time they had their periods.

Out of School Girls (control versus intervention)
Fewer OOS girls had ever had a period, and age of onset was later than among OOS than IS girls. Level of knowledge about menstruation was generally lower for OOS compared to IS girls and OOS girls were more likely to feel ashamed when they had their periods than their IS peers.

Comparison between Control and Intervention Groups
There were no systematic differences in menstrual knowledge and hygiene indicators between intervention and controls with the exception of OOS girls in the intervention being less likely to feel shame over their periods than OOS controls.

Figure 27 | IS and OOS Girls Knowledge about Menstruation



MENTAL HEALTH & SUBSTANCE ABUSE

The GEAS included indicators of depressive symptoms and lifetime substance use (alcohol, tobacco and other drugs). A score of depressive symptoms ranging from 1 to 5 summarizes responses to 4 questions including worrying for no good reason, being too unhappy to sleep at night, feeling sad, and thinking of harming self.

In School Adolescents in Control Group
Less than 20% of IS adolescents responded positively to each depressive symptom and a small minority (3%) indicated that they had considered harming themselves because they were very unhappy. IS girls scored higher on the depressive symptom scale than IS boys (mean score: 1.75 vs. 1.60), as they were more likely to agree with more than 1 depressive item than boys.
IS boys were twice as likely to report having ever

Figure 28 | IS and OOS Adolescents Depressive Symptoms

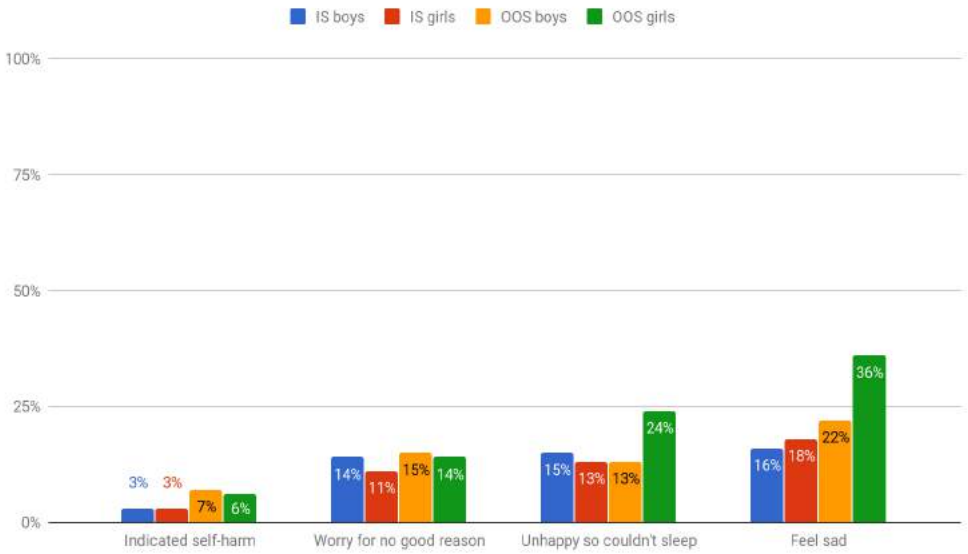
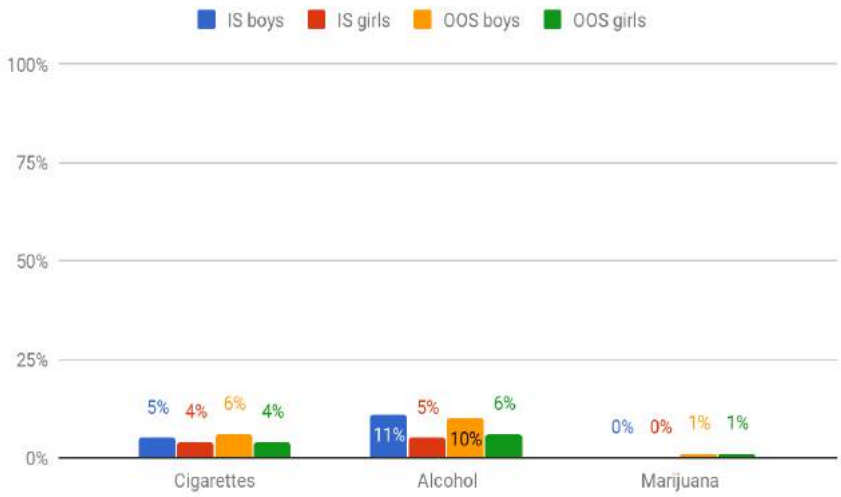


Figure 29 | IS and OOS Adolescent Girls Substance Use



consumed alcohol than girls (11% versus 5%), while smoking was comparable for both sexes (4% and 5%) and use of illegal drugs was marginal (less than 1% of adolescents).

Out of School Adolescents in Control Group

OOS girls reported more depressive symptoms than IS girls. They were twice as likely to indicate being unable to sleep at night because they were too unhappy and were more likely to indicate they were feeling sad. OOS boys and girls alike were more likely than IS adolescents to report they had thought of harming themselves because they were unhappy. Altogether depressive symptom scores were higher among OOS adolescents than IS adolescents, particularly for girls. The percentage of OOS adolescents regarding smoking, alcohol and drug consumptions was equivalent to IS adolescents.

Comparison between Intervention and Control Groups

Few differences between intervention and control groups emerged with the exception of IS boys in the intervention group who were more likely to indicate they had considered harming themselves compared to the control group.

SEXUAL HEALTH KNOWLEDGE

Knowledge of pregnancy prevention was assessed through 8 questions asking about reproductive capacity and family planning. We present the percentage of adolescents who provide correct answers to each item as well as a summary score ranging from 0 to 8 assessing the number of correct answers. We also explored young people's knowledge about HIV through 4 questions and provide a summary score ranging from 0 to 4. Adolescents were finally asked about their knowledge of SRH services and stigma surrounding use of these services.

In School Adolescents in control Group

IS adolescents' knowledge about pregnancy and HIV prevention was generally low, with overall scores approaching 4 out of 8 correct answers for pregnancy prevention and 2 or less out of 4 correct answers for HIV prevention. IS boys scored higher than IS girls on knowledge about pregnancy prevention (3.94 versus 3.57) and knowledge about HIV prevention (2.05 versus 1.78). Two out of ten IS adolescents had misperceptions of pregnancy risk through kissing, only half believed pregnancy could occur at first sex, and a minority (24% of girls and 15% of boys) thought boys could be fertile every day of the month. Two thirds of IS adolescents were aware of pregnancy prevention using injectable but only half of IS boys and a quarter of IS girls thought condoms could prevent pregnancy and only a third of boys and a quarter of girls knew about birth control pills. A substantial percentage of IS boys and girls (66% and 76%) thought they could prevent pregnancy by using traditional herbs.

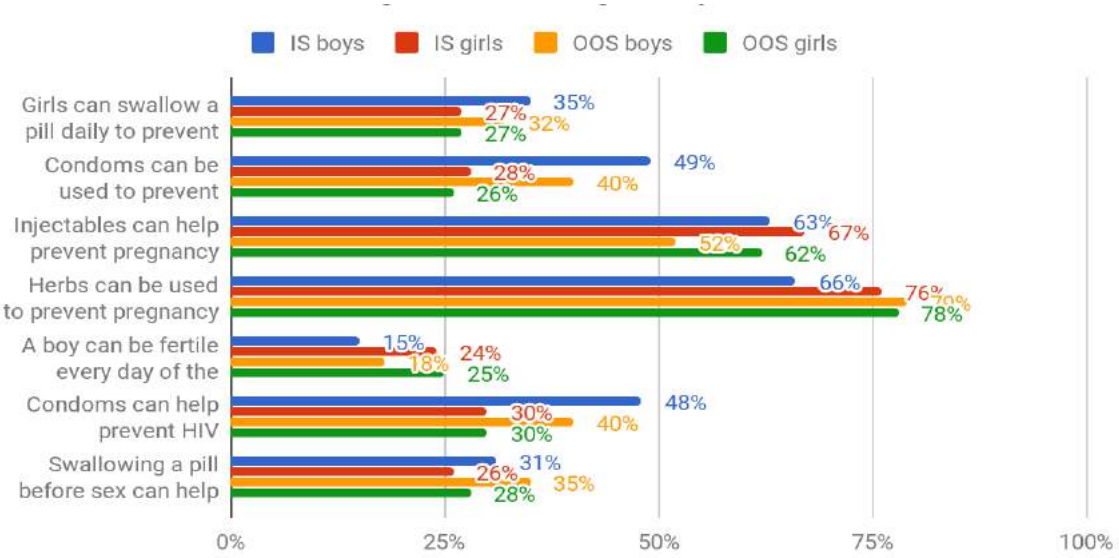
IS adolescents were better aware of the risk of HIV transmission than the risk of pregnancy at first sex, but were equally ill informed about HIV prevention using condoms. A third of IS boys and a quarter of IS girls seemed to be aware of HIV Pre-Exposure Prophylaxis (PrEP), although further questioning about PrEP would be needed to confirm these results.

IS adolescents had little knowledge of SRH services. Only a third of IS boys and less than a quarter of IS girls indicated they knew where to go to get a condom, half of IS boys and girls knew where to get STI treatment and half of IS girls knew where to get contraception. Stigma was prevalent with 43% of boys and 36% of girls indicating they would feel embarrassed to get a condom and 43% of girls indicating they would be embarrassed to seek contraceptive services at a health facility.

Out of School adolescents in control group

OOS participants level of knowledge about pregnancy and HIV prevention was lower than IS adolescents, with an average pregnancy prevention score of 3.30 for both sexes and HIV scores of 1.77 for OOS boys versus 1.70 for OOS girls. Fewer OOS adolescents than IS adolescents knew about SRH services, while perceptions of embarrassment were equally prevalent in both groups.

Figure 30 | IS and OOS Adolescents' Knowledge about Pregnancy and HIV



Comparison between Intervention and Control Groups

There were few systematic differences between intervention and control. IS boys in the intervention group were less likely to know about pregnancy prevention methods than controls, although overall pregnancy prevention scores were similar. IS girls in control group were more likely to feel embarrassed to get a condom if needed (36% versus 30%), OOS boys had a higher pregnancy prevention summary score than controls although they showed no difference in response to each individual item except for the fact that more boys from intervention groups than controls (33% versus 21%) believed kissing or hugging could get a girl pregnant. In addition, a greater proportion of OOS girls in the intervention arm knew about pregnancy prevention using injectable contraception than their peers in the controls (73% versus 62%).

RELATIONSHIPS

This section focuses on adolescents' experience with romantic relationship, as well their peers' experiences. Among adolescents who had ever engaged in a romantic relationship, the survey assessed the quality of the relationship and experience of intimate partner violence with the last partner. Two scales were designed to quantify quality of relationship, including power imbalance and intimacy. The power imbalance scale encompassed 4 questions exploring partner influence on decisions of behavior of respondents while the intimacy scale encompassed 6 questions about feelings and trust between partners. Median scores for both scales ranged from 1 to 5 with higher score suggesting greater degree of power imbalance and more intimacy in relationships. Please refer to **Appendix II** for the distribution of items constituting each scale.

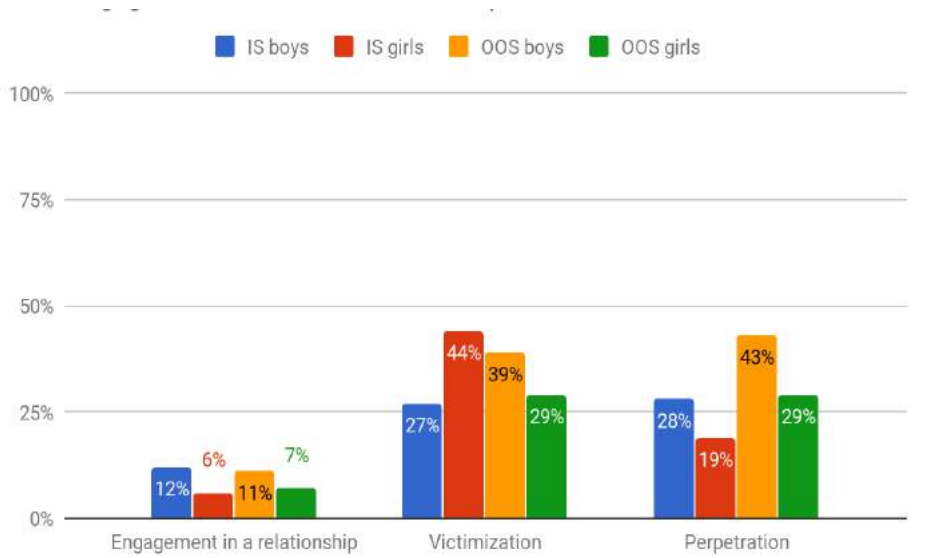
In School Adolescents in Control Group

IS boys were twice as likely to report having been in any relationship compared to IS girls, although only a minority of both genders reported such an experience (12% versus 6%). Altogether, 7% of IS boys and 4% of IS girls had a current boy/girl friend at the time of the survey.
For those who had ever been in a romantic relationships, IS girls were slightly more likely than IS boys to report intimacy (4.28 versus 3.90) and power imbalance (3.75 versus 3.20) in their last/current relationship. IS girls were also more likely to report intimate partner violence (44% versus 27%), mostly in the form of pushing, grabbing or throwing objects. IS boys were more likely to report violence perpetration with their last/current partner than girls (28% versus 19%).

Out of School Adolescents in Control Group

Romantic experiences were also rare among OOS adolescents with no differences with IS adolescents (boys: 11% versus 12%; girls: 7% versus 6%). OOS boys were more likely than IS boys to report power imbalance in their last relationship (4.06 versus 3.23) and more likely to report intimacy relative to IS boys (4.22 versus 3.90). Conversely, OOS girls were less likely to report power imbalance and less likely to report intimacy in their last relationship than IS girls. Contrary to their IS peers, scores of power imbalance and intimacy were higher for OOS boys than OOS girls. In addition, OOS boys were more likely than IS boys to report having experienced intimate partner violence (39% versus 27%) and while the opposite was true for girls (29% OOS girls versus 44% IS girls). As a result, IPV was more frequently reported by OOS boys than OOS girls. OOS boys and girls alike were more likely to have exerted violence on their last/current partner than their IS peers. Violence perpetration reached 43% for OOS boys and 29% for OOS girls.

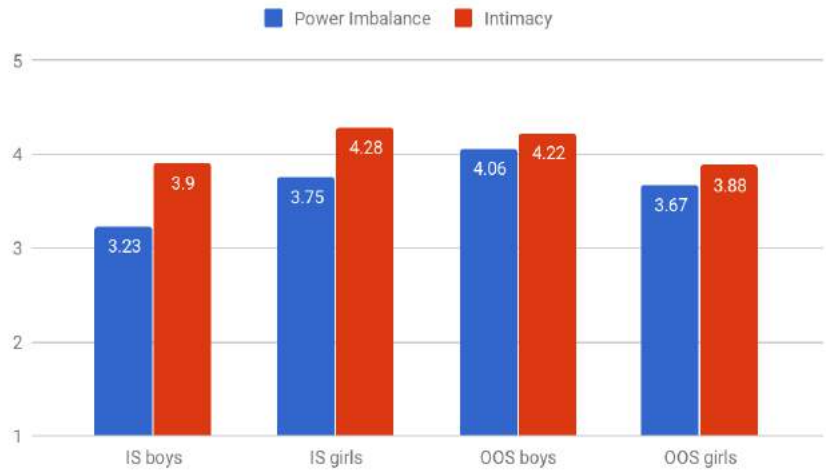
Figure 31 | IS and OOS Adolescent Engagement in Romantic Relationships and IPV



Comparison between intervention and control groups

There were no differences in romantic experiences between adolescents in the intervention and control groups, but IS boys from the intervention group were more likely to have exerted violence on their last partner than IS boys in the control group.

Figure 32 | IS and OOS Adolescents Power Imbalance and Intimacy



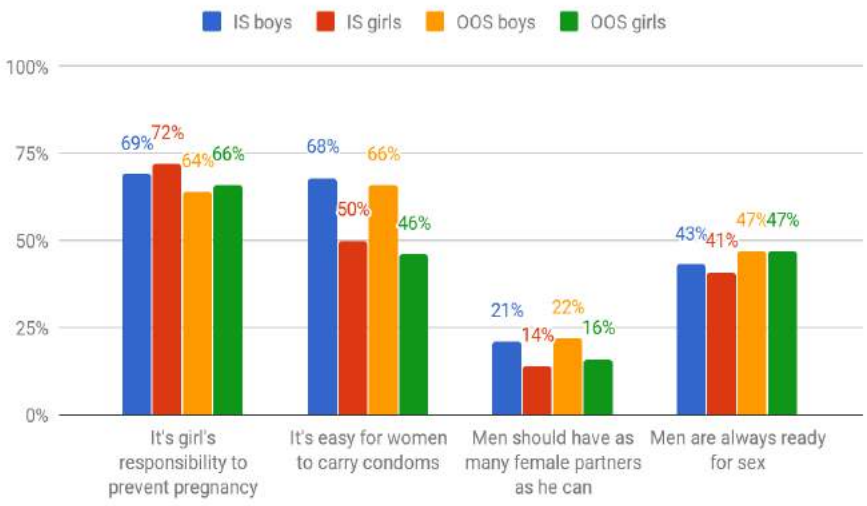
SEXUAL BEHAVIOR

Adolescents were asked about their beliefs regarding sexual behaviors for boys and girls their age and about their own coital and non-coital experiences. Four questions (displayed in the sexual behavior table) related to attitudes about appropriate circumstances under which boys and girls could engage in sexual activity and their responsibility for preventing pregnancy. Adolescents were also asked about their lifetime experience of coital and non-coital sexual activities, including kissing, touching and sexual intercourse.

In School Adolescents in Control Group

72% of IS girls and 69% of IS boys believed that it was the girl or woman's responsibility to prevent pregnancy, but at the same time 68% of IS boys and 50% of IS girls agreed that women who carried condoms were easy. One in five IS boys and 14% of IS girls believed men should have as many partners as he could and about four in ten IS adolescents thought men were always ready for sex. Only 7% of IS boys and 5% of IS girls had ever kissed someone they loved while 7% of IS boys and 4% of IS girls reported ever having touched or been touched by someone in a sexual way. Finally, 5% for IS boys and 1% of IS girls indicated ever having had vaginal sexual intercourse.

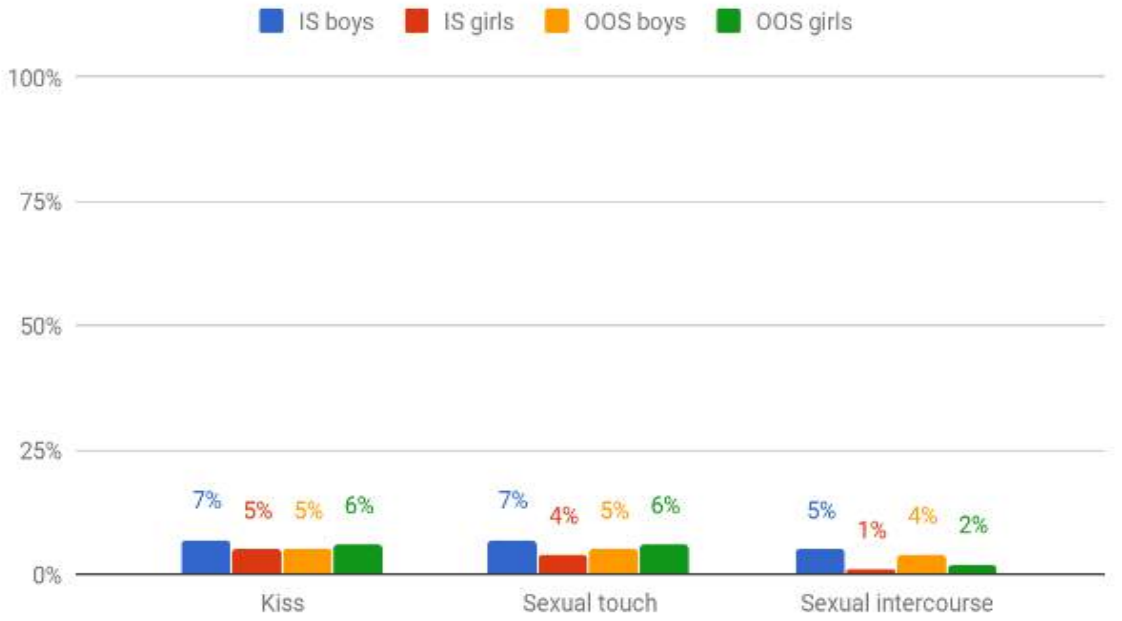
Figure 33 | IS and OOS Adolescent Sexual Norms



Out of School Adolescents in Control Group

Sexual attitudes were comparable between OOS and IS adolescents. Few OOS adolescents reported coital or non-coital sexual experiences, with no difference with IS adolescents.

Figure 34 | IS and OOS Adolescent Sexual Experiences



Comparison between intervention and control groups
No systematic difference between intervention and controls with the exception of IS girls in the intervention group who were more likely to believe men were always ready for sex than their peers in control group.

LIMITATIONS

This research is not without limitations. The sample is not representative of VYAs in the DRC or even in Kinshasa, but is comprised predominantly of VYAs from low socio-economic backgrounds. Therefore, results are not generalizable to all VYAs in the country or in the capital city, but adolescents in the control group represent an underserved urban population that is growing exponentially in the country.

While participants in the control group were randomly selected, those in the intervention group were selected from adolescents participating in the GUG! intervention, who voluntarily participated in the intervention. The voluntary, rather than random nature of participation in the intervention has the potential to create systematic baseline differences between control and intervention groups. Baseline differences between control and intervention groups are nevertheless informative in understanding adolescents who opt in to gender transformative interventions. Propensity score matching and difference analysis will be used in longitudinal analyses to address the baseline differences between study groups.

The data presented is from baseline of longitudinal data collection, and therefore we can only report on cross-sectional differences, without establishing temporality of associations observed. Therefore, this baseline report focuses on descriptive and bivariate associations, while more in

depth analysis of study objectives, including the association between gender norms and health and the impact evaluation of the gender transformative intervention will be presented based on follow-up data.

Some results raise concern regarding social desirability bias and the likelihood of underreporting sensitive behavior or accepting stigmatized topics. For instance, a number of risky behaviors were more commonly attributed to friends than self, while pregnancy termination was more likely evoked as an option for others than self. The use of vignettes and exploration of peer behaviors illustrate these concerns, but are not useful in correcting for response bias. However, follow up surveys will provide an opportunity to update/correct baseline information on these sensitive topics.

For the depressive symptoms measure, items have not been clinically validated and therefore cannot be used as a diagnostic tool to assess depression. In subsequent waves of the data collection, the validity of the depressive symptoms screener included here will be assessed through the incorporation of a clinically validated measure. Finally, low levels of sexual and relationship history limited any findings for sexual history, behavior and contraceptive use among this sample.

IMPLICATIONS FOR THE INTERVENTION

OUT OF SCHOOL ADVERSITY



Out of School adolescents faced a multitude of familial, social and economic disadvantages when compared to their counterparts enrolled in school. Specifically, they experienced higher levels of poverty, were less likely to live in two-parent households and experienced more feelings of insecurity in their communities. Out of school adolescents reported higher levels of poverty-related deprivation (hunger, eviction, etc.) and were more likely to report experiences of neglect and familial adversity. Adversities were tied to health outcomes, with out of school adolescents reporting more depressive symptoms and poorer health on average than those in school.

GENDER NORMS



Findings from baseline demonstrate strong endorsement of norms that reinforce notions of boys' and men's strength and women's and girls' vulnerability. Likewise, participants ascribed sexual double standards, which encourage romantic and sexual engagement among boys but constrain girls' behaviors in this arena.

BODY COMFORT



Participants reported conflicting feelings about their bodies and the pubertal changes they were experiencing. In general, boys and girls reported positive body image and satisfaction, but also concerns about their pubertal development. Girls also reported conflicting feelings about menstruation; simultaneously endorsing feelings of shame and pride regarding their periods.

SEXUAL HEALTH KNOWLEDGE



Sexual health knowledge in the sample was extremely limited for all subgroups of VYAs. Knowledge was low across domains of sexual health, including physiological understanding of pregnancy, reproduction and HIV acquisition; and prevention modalities for both pregnancy and HIV. Further, perceived self-efficacy in accessing SRH services was low and stigma high.

ROMANTIC RELATIONSHIPS



Experiences of romantic relationships were rare, perhaps early adolescents have not yet embarked upon this phase of their development. Alternatively, this result could indicate underreporting of romantic relationships in the sample, particularly in light of more commonly reported perceived peer relationship experience. However, the paucity of participants' relationship experience in the sample could indicate an opportunity for the GUG intervention to positively impact relationship norms and behaviors prior to an adolescent first engaging in romantic or sexual encounters.

APPENDICES

APPENDIX I: Study Methodology and Data Quality Results

GEAS Kinshasa Survey Methodology

Measures

The GEAS measures have been developed, fine-tuned and validated over the course of four years. The formative phase of research involved a mixed-methods approach. This process involved qualitative research with adolescents and their parents and guardians to establish the foundation of these quantitative measures. The resulting quantitative measures were piloted over two rounds with early adolescents to validate and finalize the instruments. The resulting measures assess gender norms, sexuality, contextual factors and health behaviors and outcomes among adolescents ages 10-14.

Specifically, four GEAS tools were developed, piloted and are used in the longitudinal phase of research:

1. Parent/Guardian Questionnaire
2. Health + Instrument
3. Gender Norms Instrument
4. Vignettes-based Measure of Gender Equality

In-depth narrative interviews:

- Carried out interviews with between 30 and 40 adolescents aged 11-13 years and an equal number of parents/guardians
- Transcribed and translated the findings and posted them in the GEAS SharePoint
- Coded the qualitative data
- Contributed to the development of the analytic framework to be used in all sites
- Used the data to develop vignette stems

Gender Equitability in Relationships Instrument:

- Conducted a workshop with between 5-15 adolescents aged 10-14 years to develop local scenarios for the vignettes
- Drafted an instrument with scenarios and questions
- Conducted focus groups with adolescents using the instrument
- Translated the revised instrument and posted it in the GEAS SharePoint
- Participated in cross-site comparisons to arrive at a final global version

Health Instrument:

- Provided inputs to its development
- Undertook face validity testing with 20 young people in each site

Gender Norms Scale Instrument:

- Provided inputs to its development
- Undertook face validity testing with 20 young people in each site

Face validity testing:

- Carried out face validity tests of the health and behavior instrument and reported on the results

Pilot testing:

- Carried out pilot tests of all three instruments using mobile data collection, between January and April 2016 after which time the pilot data were analyzed, scales developed, instruments revised and preparations made for a final round of pilot testing (which is currently underway).

Study Design

GEAS phase 2 is designed as a quasi-experimental study with 2 arms (intervention and control), each divided into 2 subgroups, in school and out of school adolescents. In both an intervention and control group 1,400 young people (1000 in school and 400 out school) ages 10-14 at baseline will be followed over a period of 4 years.

In Kinshasa, the survey and intervention took place in 2 poor urban communes: Kimbanseke (population 946,000) and Masina (population 485,000), home to large populations of poor urban dwellers.

Sampling

In school adolescents (n=2010)
In each arm, we followed a two-stage process starting with the selection of 40 schools followed by the selection of about 25 students within participating schools. The selection of schools was stratified by school type (public/private; religious/ non-religious) and school distribution in communities. In the control arm, a random selection of eligible students 10-14 was carried out, after stratification by sex. In the intervention arm, adolescents were selected based on their participation in the Growing up Great intervention in each school.

Out-of-school (n=824)
Because of high secondary school dropout rates (>15%), a subsample of out of school adolescents 10-14 years from the same geographies as the in school samples were selected to participate. Out-of-school participants were recruited with the assistance of community-based organizations (CBOs) that work with OOSY in these communes, who list all out of school adolescents living in households within the study area. Street children were not included in GEAS as follow up rates are likely to drop dramatically for unstably housed participants.

Parents/guardians (n=2800)
One parent/guardian of each adolescent participant was included at baseline to provide sociodemographic information about themselves and household information.

Data Collection

The baseline survey took place between June and October 2017. Data collection was sequenced in 2 stages. From June to July, baseline data was collected among all out of school adolescents (n=824) and 1,003 in school adolescents in the control group. In October, data collection resumed to include 1,007 in school adolescents in the intervention arm, as we needed to wait for the start of the school year for the intervention to start. The survey was conducted using tablets and was primarily interviewer-facilitated, although some interviews were self-administered using CASI/ACASI features. In the case of face to face interviews, adolescents who could read had the opportunity to complete some sections using CASI/ACASI for increased privacy.

Data Quality

A data quality check analysis was conducted to determine the percentage of missing or incoherent information and ultimately determine the number of cases or variables to be dropped or recoded. The methodology of data quality checks is detailed below, followed by the results of the analysis of data quality for baseline data.

Missingness

To calculate the percentage of missingness for each observation, we examined all the questions with designed skip patterns throughout the whole survey and generated an indicator variable for each question that was embedded with skip patterns. Next, taking into account missed questions due to skip patterns, we summarized the total number of missed questions by sections of questions and by the whole survey separately. Last, per each section of questions and throughout the whole survey, we calculated percentage of missingness for each respondent based on the actual number of questions each study participant was supposed to answer. To evaluate the potential existence of system errors for survey platform (SurveyCTO), we checked missingness prior to recording refuse-to-answer and/or don't know as missing responses. Once skip patterns were checked, we evaluated overall missingness after recoding refuse-to-answer and/or don't know (when non-informative) as missing information. All the data quality checking procedures were developed using StataCorp LLC, TX (Version 14.2).

% of Missing per Observation	*In-School*		*Out-of-School*	
	Control (n=1003)	Intervention (n=1013)	Control (n=380)	Intervention (n=446)
% (n)				
< 5%	99.00 (993)	99.01 (1003)	98.68 (375)	97.76 (436)
5% - 10%	0.90 (9)	0.89 (9)	1.05 (4)	2.24 (10)
10% - 15%	0.10 (1)	0.10 (1)	0 (0)	0 (0)
≥ 15%	0 (0)	0 (0)	0.26 (1)	0 (0)

Distress questions

At the end of the survey, regardless of mode of data collection, the interviewer completed a few questions assessing the quality of interview or attitude of adolescent suggesting possibly poor response quality to data collection. Specifically, the following questions were asked to evaluate the domains of data quality: how did you find the respondent's cooperation, how accurate/true did you find the respondent's answers, how did you find the respondent's cooperation and attentiveness during the interview, and how did you find the respondent's understanding of the questions discussed.

Inclusion & Exclusion Criteria

Adolescents were included in the final dataset if they were 10 to 14 years old at the time of the interview, had given assent to participate in the study, and whose parents had consented to their child's participation in the study. Participants were excluded from the final sample based on two criteria. The first was the percentage of non-meaningful response across survey (excluding gender norms and vignettes sections). Based on the distribution of the percentage of missing responses of Kinshasa baseline data we decided a cutoff as 15% (i.e. 15% or more of survey data for that case were comprised of "Don't know" or "Refuse" responses), which captured the top 1 percentile of cases with the most missing responses. The second exclusion criteria was any two out of four consistent assessment by the interviewer for poor response quality (i.e. poor perceived: cooperation, response accuracy, comprehension, or concentration), of which one has to evaluate response accuracy or understanding of the asked questions. In summary, any cases fulfilling the first or second criteria were flagged for removals from downstream analysis.

Brief Description of Flagged Cases

After applying exclusion criteria, 10 observations out of 2842 adolescents were flagged as poor responses quality cases, among which 80% were boys and 20% were girls. Half of the ten observations were 10 years of age, one fifths aged 11 and 12 respectively, and the rest one tenths were 13-years-old. Six were not enrolled in school at the time of study. Ten cases were evenly distributed in control and intervention groups. Again, among these ten flagged cases, the range of percentage of missing responses are from 0% to 36.22%, with a median of 1.59% (IQR: 0% - 2.82%).

Data quality Results

Overall data quality was satisfactory, with participants missing (refuse to answer or don't know responses) 16.10% of survey responses. Missingness was slightly higher for boys than for girls. Missingness also varies by data mode, with significant increases in missingness for respondents combining CAPI and ACASI versus CAPI alone or ACASI alone

Survey Quality Indicators	
Operational Survey Data	% (n)
Missingness [mean ± SD (range)]	0.98% ± 1.18% (0% - 11.63%)
Boys	1.09% ± 1.28% (0% - 11.63%)
Girls	0.87% ± 1.05% (0% - 9.95%)
Survey Duration (hours) [Median (IQR)]	1.81 (1.56 - 2.18)
Boys	1.82 (1.55 - 2.18)
Girls	1.80 (1.48 - 2.18)
Distress Questions	% (n)
Feel somewhat upset or worried after survey	0.87 (25)
Interviewer perceived respondent's:	
Cooperation as bad or very bad	0.56% (16)
Answers not very **accurate or true**	0.45% (13)
Understanding of questions bad or very bad	0.28% (8)
Concentration and attentiveness bad	0.56% (16)
Number of **breaks** taken during interview	1 (1-2)

Caregiver and Adolescent Survey Match

Parent - Adolescent Match (n=2819)	In school control % (n)	In school intervention	Out of school control % (n)	Out of school intervention
Age	96.18 (957)	96.72 (972)	96.84 (368)	96.36 (423)
Caregiver	88.04 (876)	86.07 (865)	67.89 (258)	70.62 (310)

Summary of Sample after Data Cleaning

	In School		Out-of-School	
Sample Description	**Control**	**Intervention**	**Control**	**Intervention**
Adolescent Initially included	49.75 (1003)	50.25 (1013)	46.00 (380)	54.00 (446)
excluded	50.00 (2)	50.00 (2)	50.00 (3)	50.00 (3)
Final sample adolescents	49.75 (1001)	50.25 (1011)	45.98 (377)	54.02 (443)
Parent match	49.75 (993)	50.25 (1003)	46.37 (377)	53.63 (436)

Appendix II - Individual Items for Scales

GENDER NORMS IN-SCHOOL ADOLESCENTS	Boys %(n)			Girls %(n)		
	Control	Intervention	p-value	Control	Intervention	p-value
Heteronormative Relationships						
Items (agree a little or agree a lot)						
- It's normal for a boy your age to want a girlfriend	21.3 (105)	16.36 (79)	**0.048**	18.9 (96)	19.89 (105)	0.687
- It's normal for a girl to want a boyfriend at your age	24.14 (119)	19.46 (94)	0.077	14.37 (73)	16.1 (85)	0.439
- A boy and a girl your age should be able to spend time together alone if they want to	50.1 (247)	51.55 (249)	0.650	32.28 (164)	35.42 (187)	0.287
- A girl should be able to have a boyfriend if she wants to	69.98 (345)	65.84 (318)	0.166	65.55 (333)	66.48 (351)	0.753
- A boy should be able to have a girlfriend if he wants to	73.63 (363)	67.29 (325)	0.030	73.23 (372)	68.37 (361)	0.086
Sexual Double Standard						
Items (agree a little or agree a lot)						
- Adolescent boys fool girls into having sex	81.74 (403)	79.92 (386)	0.468	85.63 (435)	90.15 (476)	**0.026**
- Adolescents girls should avoid boys because they trick them into having sex	77.48 (382)	78.05 (377)	0.831	84.84 (431)	86.55 (457)	0.432
- Boys feel they should have girlfriends because their friends do	85.8 (423)	87.16 (421)	0.534	91.73 (466)	90.53 (478)	0.497
- Boys generally compete for the prettiest girls	95.33 (470)	94 (454)	0.352	93.7 (476)	94.7 (500)	0.493
- Girls are the victims of rumors if they have boyfriends	81.14 (400)	84.06 (406)	0.229	86.22 (438)	89.77 (474)	0.078
- Boys have girlfriends to show off to their friends	80.53 (397)	78.88 (381)	0.523	83.66 (425)	86.55 (457)	0.191
- Adolescents boys lose interest in a girl after they have sex with her	74.65 (368)	74.95 (362)	0.913	84.25 (428)	87.5 (462)	0.133
- Boys have girlfriends for fun more than love	82.35 (406)	78.26 (378)	0.108	85.83 (436)	85.98 (454)	0.942
- Boys like girls who wear revealing clothes	70.39 (347)	73.91 (357)	0.219	83.66 (425)	86.93 (459)	0.137
- Girls your age often get into "trouble" when they have boyfriends	87.02 (429)	85.09 (411)	0.385	85.63 (435)	85.8 (453)	0.939
- Boys tell girls they love them when they don't	71.81 (354)	68.12 (329)	0.209	74.61 (379)	81.63 (431)	**0.006**
- Girls who have boyfriends are irresponsible	74.04 (365)	76.19 (368)	0.437	75.39 (383)	77.46 (409)	0.433
- A girl will lose interest in studying if she has a boyfriend	75.66 (373)	73.91 (357)	0.530	65.16 (331)	66.86 (353)	0.564

GENDER NORMS OUT-OF-SCHOOL ADOLESCENTS	Boys %(n)			Girls %(n)		
	Control	Intervention	p-value	Control	Intervention	p-value
Heteronormative Relationships						
Items (agree a little or agree a lot)						
- It's normal for a boy your age to want a girlfriend	18.52 (35)	26 (65)	0.064	25 (47)	27.98 (54)	0.510
- It's normal for a girl to want a boyfriend at your age	22.75 (43)	27.2 (68)	0.288	25.53 (48)	23.83 (46)	0.701
- A boy and a girl your age should be able to spend time together alone if they want to	54.5 (103)	52.8 (132)	0.724	35.11 (66)	41.45 (80)	0.203
- A girl should be able to have a boyfriend if she wants to	66.14 (125)	72 (180)	0.187	61.7 (116)	62.69 (121)	0.842
- A boy should be able to have a girlfriend if he wants to	70.9 (134)	75.2 (188)	0.313	69.68 (131)	72.54 (140)	0.538
Sexual Double Standard						
Items (agree a little or agree a lot)						
- Adolescent boys fool girls into having sex	75.13 (142)	76.4 (191)	0.759	80.85 (152)	78.76 (152)	0.611
- Adolescents girls should avoid boys because they trick them into having sex	77.78 (147)	73.2 (183)	0.272	78.72 (148)	78.76 (152)	0.994
- Boys feel they should have girlfriends because their friends do	85.19 (161)	85.6 (214)	0.903	88.3 (166)	85.49 (165)	0.417
- Boys generally compete for the prettiest girls	92.59 (175)	92.8 (232)	0.934	92.55 (174)	92.23 (178)	0.905
- Girls are the victims of rumors if they have boyfriends	83.6 (158)	80.8 (202)	0.450	87.23 (164)	84.46 (163)	0.437
- Boys have girlfriends to show off to their friends	75.66 (143)	78 (195)	0.564	82.45 (155)	84.97 (164)	0.504
- Adolescents boys lose interest in a girl after they have sex with her	72.49 (137)	68.4 (171)	0.354	80.85 (152)	75.13 (145)	0.178
- Boys have girlfriends for fun more than love	79.37 (150)	76.8 (192)	0.521	78.72 (148)	82.9 (160)	0.300
- Boys like girls who wear revealing clothes	68.25 (129)	71.6 (179)	0.448	82.45 (155)	82.9 (160)	0.907
- Girls your age often get into "trouble" when they have boyfriends	83.6 (158)	81.2 (203)	0.515	80.32 (151)	85.49 (165)	0.180
- Boys tell girls they love them when they don't	66.14 (125)	63.2 (158)	0.524	70.21 (132)	75.65 (146)	0.232
- Girls who have boyfriends are irresponsible	70.37 (133)	72 (180)	0.709	77.66 (146)	72.54 (140)	0.248
- A girl will lose interest in studying if she has a boyfriend	71.96 (136)	76 (190)	0.337	67.55 (127)	72.02 (139)	0.342

Appendix III - GEAS Kinshasa Report Tables

SAMPLE DESCRIPTION IN-SCHOOL ADOLESCENTS	Boys %(n) n=976			Girls %(n) n=1036		
	Control	**Intervention**	**p-value**	**Control**	**Intervention**	**p-value**
Age mean ± SD (range)	11.97 ± 1.37 (10-14)			11.85 ± 1.38 (10-14)		
10	21.06 (107)	22.16 (117)	**0.006**	18.86 (93)	18.63 (90)	**0.002**
11	18.31 (93)	25.38 (134)		19.47 (96)	22.98 (111)	
12	21.06 (107)	22.73 (120)		19.68 (97)	25.05 (121)	
13	22.05 (112)	14.96 (79)		19.27 (95)	20.29 (98)	
14	17.52 (89)	14.77 (78)		22.72 (112)	13.04 (63)	
Neighborhood						
Kimbanseke	51.12 (252)	50.52 (244)	0.214	49.80 (253)	48.86 (258)	0.595
Masina	48.88 (241)	48.86 (236)		50.20 (255)	50.95 (269)	
Ethnicity						
Kwilu-Kwango	28.22 (138)	41.63 (199)	**0**	34.38 (164)	45.25 (238)	**0**
Bakongo (N or S)	39.67 (194)	17.15 (82)		34.38 (164)	18.06 (95)	
Kasai, Katanga, Tanganyika	10.63 (52)	12.76 (61)		9.01 (43)	12.93 (68)	
Lower Kasai	4.09 (20)	8.58 (41)		8.18 (39)	6.84 (36)	
Multiple ethnicities	5.73 (28)	6.69 (32)		2.52 (12)	3.61 (19)	
Other *	11.66 (57)	13.18 (63)		11.53 (55)	13.31 (70)	
Migration						
Adolescent born in Kinshasa	88.57 (434)	84.73 (405)	0.079	86.88 (437)	81.9 (430)	**0.028**
Parent/caregiver born in Kinshasa	54.9 (269)	47.27 (225)	**0.018**	56.69 (284)	46.91 (243)	**0.002**
Religion						
No religion	0.41 (2)	0 (0)	0.072	0 (0)	0 (0)	0.117
Catholic	12.98 (64)	18.84 (91)		10.43 (53)	14.96 (79)	
Protestant	8.32 (41)	6.83 (33)		6.89 (35)	6.25 (33)	
Eglise de Reveil	49.9 (246)	48.03 (232)		55.71 (283)	49.05 (259)	
Muslim	0.61 (3)	0.41 (2)		0.79 (4)	0.76 (4)	
African traditional religion / Animism	2.23 (11)	0.62 (3)		2.56 (13)	1.7 (9)	
Other Christian ▲	22.31 (110)	22.15 (107)		21.46 (109)	25.76 (136)	
Other	3.25 (16)	3.11 (15)		2.17 (11)	1.52 (8)	
Literacy						
Able to read simple sentence	86.82 (428)	90.48 (437)	0.072	76.13 (386)	84.25 (444)	**0.001**
Wealth Index						
Bottom 20 percentile	17.55 (86)	8.58 (41)	**0**	15.51 (78)	8.95 (47)	**0.003**
20 - 40 percentile	20.2 (99)	16.95 (81)		17.1 (86)	16.57 (87)	
40 - 60 percentile	19.59 (96)	15.69 (75)		22.07 (111)	19.43 (102)	
60 - 80 percentile	19.8 (97)	28.66 (137)		23.26 (117)	25.52 (134)	
Top 20 percentile	22.86 (112)	30.13 (144)		22.07 (111)	29.52 (155)	
Caregiver gainfully employed	23.34 (120)	22.15 (107)	0.419	25.98 (132)	23.11 (122)	0.282

SAMPLE DESCRIPTION OUT-OF-SCHOOL ADOLESCENTS	Boys %(n)			Girls %(n)		
	Control	**Intervention**	**p-value**	**Control**	**Intervention**	**p-value**
Age	11.95 ± 1.40 (10-14)			11.93 ± 1.41 (10-14)		
10	21.16 (40)	20.8 (52)	0.341	22.87 (43)	20.73 (40)	0.336
11	20.63 (39)	17.6 (44)		18.62 (35)	19.69 (38)	
12	24.34 (46)	21.2 (53)		18.62 (35)	23.32 (45)	
13	19.58 (37)	18.4 (46)		23.94 (45)	16.58 (32)	
14	14.29 (27)	22 (55)		15.96 (30)	19.69 (38)	
Neighborhood			0.442			0.504
Kimbanseke	45.50 (86)	49.20 (123)		47.87 (90)	51.30 (99)	
Masina	54.50 (103)	50.80 (127)		52.13 (98)	48.70 (94)	
Ethnicity						
Kwilu-Kwango	38.55 (69)	42.98 (104)	0.057	42.7 (76)	50.54 (94)	**0.002**
Bakongo (N or S)	29.61 (53)	16.94 (41)		23.6 (42)	13.98 (26)	
Kasai, Katanga, Tanganyika	12.85 (23)	16.53 (40)		8.99 (16)	11.83 (22)	
Lower Kasai	3.35 (6)	5.79 (14)		4.49 (8)	11.29 (21)	
Multiple ethnicities	5.59 (10)	4.96 (12)		4.49 (8)	0.54 (1)	
Other *	10.06 (18)	12.81 (31)		15.73 (28)	11.83 (22)	
Migration						
Adolescent born in Kinshasa	90.48 (171)	85.71 (210)	0.133	87.7 (164)	81.68 (156)	0.104
Parent/caregiver born in Kinshasa	59.26 (112)	58.78 (144)	0.919	68.09 (128)	56.38 (106)	**0.019**
Religion						
No religion	0 (0)	0 (0)		0 (0)	0 (0)	
Catholic	13.23 (25)	17.6 (44)	0.608^	7.45 (14)	10.42 (20)	0.589^
Protestant	3.7 (7)	5.6 (14)		2.13 (4)	3.65 (7)	
Eglise de Reveil	53.44 (101)	52.8 (132)		64.36 (121)	59.9 (115)	
Muslim	1.06 (2)	1.6 (4)		0.53 (1)	0 (0)	
African traditional religion / Animism	3.17 (6)	1.6 (4)		2.66 (5)	2.08 (4)	
Other Christian ▲	22.22 (42)	18 (45)		20.21 (38)	18.75 (36)	
Other	3.17 (6)	2.8 (7)		2.66 (5)	5.21 (10)	
Literacy						
Able to read simple sentence	46.77 (87)	42.4 (106)	0.363	37.77 (71)	40.62 (78)	0.568
Wealth Index						
Bottom 20 percentile	37.57 (71)	46.94 (115)	**0.001**	38.3 (72)	38.22 (73)	0.268
20 - 40 percentile	26.98 (51)	32.65 (80)		26.06 (49)	29.84 (57)	
40 - 60 percentile	20.11 (38)	12.24 (30)		23.94 (45)	16.75 (32)	
60 - 80 percentile	10.05 (19)	7.76 (19)		7.98 (15)	12.57 (24)	
Top 20 percentile	5.29 (10)	0.41 (1)		3.72 (7)	2.62 (5)	
Caregiver gainfully employed	16.40 (31)	15.60 (39)	0.82	15.96 (30)	16.58 (32)	0.869
^ = Fisher's exact test						

* = (central basin | ubangi | itimbiri | lake albert | basele-k, maniema or Kivu| Lunda | Pygme | Non-Congolese)

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