PASSAGES PROJECT

GROWING UP GREAT!

GEAS Wave 3 Report

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THE GLOBAL EARLY ADOLESCENT STUDY AT JOHNS HOPKINS BLOOMBERG SCHOOL OF PUBLIC HEALTH AND THE KINSHASA SCHOOL OF PUBLIC HEALTH

USAID FROM THE AMERICAN PEOPLE

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TABLE OF CONTENTS

TABLE OF FIGURES

LIST OF ACRONYMS AND KEY PHRASES

ACASI	Audio Computer-Assisted Self-Interview
CBOs	Community-Based Organizations
DiD	Difference in Differences
DRC	Democratic Republic of Congo
FACT Project	Fertility Awareness for Community Transformation
FLE	Family Life Education
GAD-7	Generalized Anxiety Disorder-7
GBV	Gender-based violence
GEAS	Global Early Adolescent Study
GUG!	Growing Up GREAT!
HIV	Human Immunodeficiency Virus
IRH	Institute for Reproductive Health at Georgetown University
ITT	Intention to treat
JHSPH	Johns Hopkins Bloomberg School of Public Health
KSPH	Kinshasa School of Public Health
MOE	Ministry of Education
MOH	Ministry of Health
PHQ9	Patient Health Questionnaire
PNSA	Programme National de la Santé des Adolescents
SGBV	Sexual and gender-based violence
SRH	Sexual and reproductive health
USAID	United States Agency for International Development
VYAs	Very young adolescents

Executive Summary

Background

The Global Early Adolescent Study (GEAS) assesses the formation of gender norms and their relation to health and behavioral outcomes during adolescence. In Kinshasa, the study also evaluates the impact of Growing Up GREAT! (GUG!), a multi-level intervention that works with young adolescents, their families and other community stakeholders to shift norms about society and gender towards improved health. This report outlines the methodology, and cross-sectional and longitudinal findings of the second year of the study.

Methodology

This report divides the results into two sections; the first presents a comparison of cross-sectional distributions of key indicators across all three waves of data collection (a two-year interval) to assess average shifts across the control group. The second outlines the impact of the GUG! intervention using difference-in-difference analyses to compare average changes in the intervention vs. control group over time.

Results

About 78% of baseline participants were followed up at Wave 3 and were able to be matched across all three rounds. Comparison of cross-sectional results among the control group from baseline to Wave 3 revealed persistent social disadvantage among out-of-school (OOS) compared to in-school (IS)[*] very young adolescents (VYAs) who reported lower wealth and literacy levels. Girls continued to have higher sexual double standard scores than boys, and reported less freedom of movement. While teasing decreased for all adolescents, the gender gap seen in Wave 2 widened in Wave 3.

Evaluation of the intervention demonstrated little impact on perceptions of gender norms in the intervention vs. control group, except for endorsement of gender-equal sharing of household chores. Though GUG! was influential in shifting perceptions toward gender equal distribution of household labor, this did not necessarily translate into behavior. Indicators of sexual health preparedness improved over time, with increased sexual and reproductive health (SRH) communication that translated to improved SRH knowledge. While awareness of contraceptive methods increased, misperceptions and stigma remained prevalent.

Limitations

Results are subject to bias due to social desirability, and from differential follow-up rates between school enrollment and study arms. Intervention impact evaluation results are also potentially subject to over- or under-estimation due to contamination across study groups. Additionally, the depression symptom checklist has not been clinically validated among these samples.

Intervention Implications

[*] *The abbreviations IS for in-school and OOS for out-of-school adolescents are used in the figures.

The GUG! intervention appeared to be effective in shifting norms about gender as they pertain to household roles and to improve knowledge of SRH. However, while gender transformative interventions among VYAs can shift perceptions, they cannot challenge the broader gender system along. This indicates a need for community and parent engagement to encourage shifting of normative gender roles to support the acceptance of shifts among adolescents.

ABOUT THE GLOBAL EARLY ADOLESCENT STUDY

Overview

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.

Longitudinal study

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 provides unique insights into how these relationships vary across cultures and by sex. In a subset of sites including Kinshasa, 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 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 its community-based organization (CBOs) partners to transform reproductive health and gender norms among very young adolescents (VYAs) ages 10-14 at baseline in Kinshasa.

Study setting

Emerging from more than three decades of war, with significant civil strife remaining in some of the eastern and central provinces, the Democratic Republic of Congo (DRC) is one of the poorest countries in the world ranking 175 out of 188 on the Human Development Index (UNDP, 2020). 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 norms and practices 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).

Kinshasa, where the GUG! intervention takes place, is the second largest city in sub-Saharan Africa with nearly 10 million inhabitants, comprising almost 15% of the entire country's population. The total population has rapidly increased 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.

However, greater access to and use of services is also apparent: at 4.4 the total fertility rate in Kinshasa is lower than other parts of the country; and the modern contraceptive prevalence rate is also higher than other provinces at 24.5% (PMA 2020).

In Kinshasa in 2018, 12.7% of girls 18-24 years had been married before age 18 and 11.4% had given birth by the age of 18 (PMA 2020). These estimates are higher among the poorest adolescents, placing these girls at higher risk of pregnancy-related complications and death. Girls who are pregnant and/or childbearing are more likely than peers to drop out of school increasing the economic burden on themselves and their families. Literacy rates of 15–24-year-olds indicate gender inequalities, with girls at 73.6% literacy compared with 91.2% for boys (DHS 2013-2014). In urban Kinshasa, 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 Kinshasa's poorest and most 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, the Programme National de la Santé des Adolescents (PNSA), and a national family life education curriculum mandated by the Ministry of Education (MOE), although it is still under- resourced and developing capacities. This gap in policy and practice results in few younger adolescents who are 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' SRH outcomes in later adolescence. Specifically, GUG! aims to increase:

- VYAs' knowledge of puberty and reproductive development
- VYAs' and parents' gender-equitable behaviors (sharing of household chores, for example)
- VYA's use of family planning and other reproductive health services among as they age into older adolescence and romantic or sexual behaviors

GUG! was informed by other successful approaches for improving gender equity 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 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.

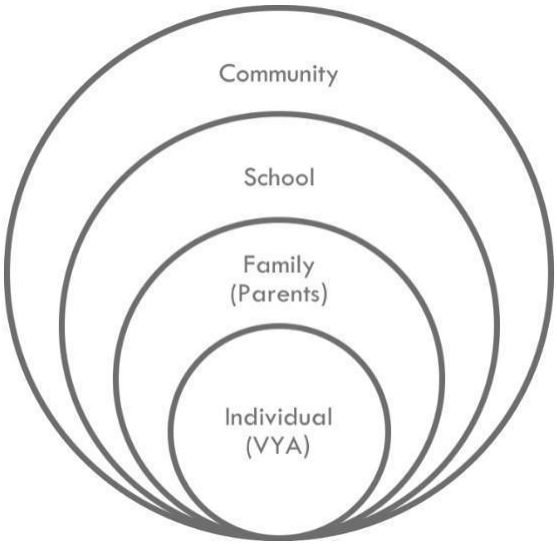
The intervention package consists of the following components, which reflect the levels of the socio-ecological model shown in Figure 1.

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 for the duration of the school year (about 20 sessions), while out-of-school VYAs participate in community- based clubs led by trained facilitators from local community-based organizations (about 28 sessions). All VYA clubs participate in one session led by a health provider trained in providing adolescent-friendly health services, and also a visit to the nearest facility to foster health system linkages and reduce stigma.

Activities for Parents and Caregivers

Figure 1 | The Socio-Ecological Model



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. However, there is no prescribed number or frequency of in-school sessions, so classroom-based use of intervention materials varies by school.

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 developed 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 engage traditional and religious leaders, as well as other influential persons in these activities.

Figure 2 | The GUG! Toolkit

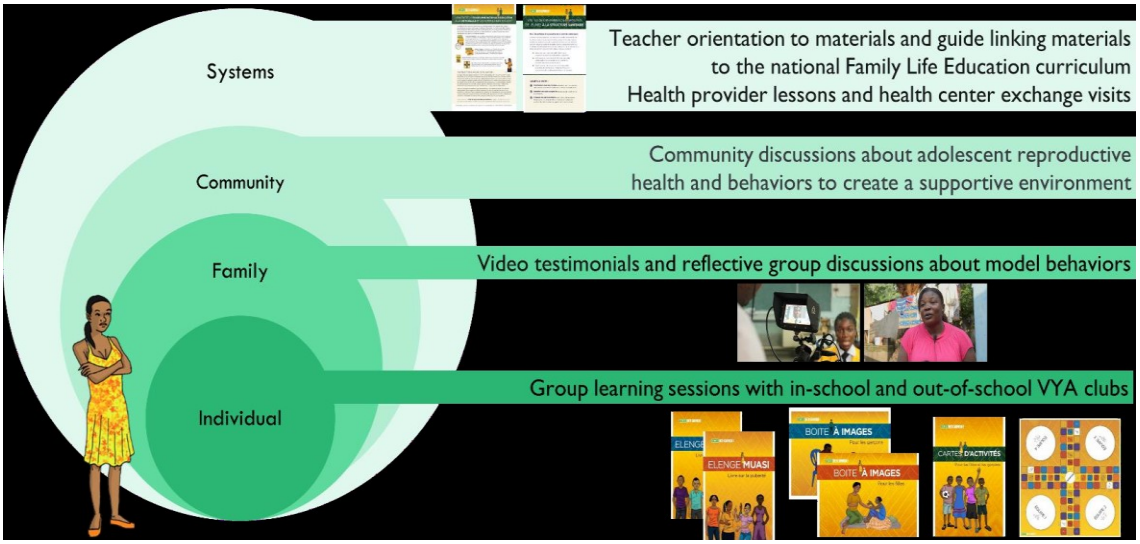


Table 1 | Growing Up GREAT! Multi-level Intervention Package

Level	Activity	Materials
Individual (VYA)	In-school: about 20 weekly club sessions (peer-led) Out-of-school: about 28 weekly club sessions (adult facilitated)	Puberty workbooks (girls & boys) Storybooks (girls & boys) Activity cards Game
Family (Caregivers)	Six video screenings and facilitated discussions	Testimonial videos
School	Classroom-based sessions (teacher-led; at will – no fixed frequency)	Resources for teachers that link to the National Family Life Education Curriculum
Health system	One provider-led session per VYA club One health center visit per VYA club	Guide for provider-led lesson Instructions for health center visit
Community	Collaborative community sessions (monthly)	Testimonial videos Community Game

GEAS STUDY DESIGN

This study 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 observational and impact evaluation components are included in a single GEAS design in Kinshasa defined as a longitudinal quasi-experimental study with an intervention and a control arm, each divided into 2 subgroups, in-school and out-of-school adolescents.

STUDY POPULATION

Eligibility criteria

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

Baseline Sampling

Out of School

At baseline, adolescents were recruited using a multi-stage sampling procedure. First, neighborhoods in the two communes were sampled using simple random sampling procedure. In each selected neighborhood, out-of-school adolescents aged 10-14 years old were identified by community-based organizations (CBOs) in partnership with Save the Children. The CBOs mapped the out-of-school 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 out-of-school adolescents in the control group. With the help of CBOs, out-of-school 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 guardian refused to participate, replacement participants were selected from the backup list. This process was repeated until the required sample size was achieved.

In School

In-school adolescents were recruited in the same neighborhoods as out-of-school 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 included 25 adolescents or less, 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.

Altogether 2,842 adolescents completed the baseline study between June and November 2017.

Wave 2 and 3 sampling

The Kinshasa School of Public Health (KSPH) team followed two different approaches to re-contact in-school and out-of-school participants for the second and third waves of data collection, though the information collected from each participant's family was consistent (name, age, sex, school at enrollment, and phone numbers).

- In-school participants were contacted through school administration and teachers, using existing school channels to establish survey times and notify participants. Participants, who were in school at baseline but had left, transferred schools or moved, were tracked using existing information from teachers and school administrators, as well as neighborhood CBOs and resources. However, teachers and school administrators were limited in their ability to locate participating students who had changed schools between waves.

- Out-of-school participants were located by KSPH in coordination with a team of representatives from non-governmental organizations and community-based associations working in the participating neighborhoods. In cases where out-of-school adolescents were difficult to reach, data collection teams contacted neighbors to collect additional information to locate participants.

Data collection began with a series of meetings with school administrators for data collection with in-school adolescents and with CBOs for out-of-school adolescents to discuss the upcoming data collection activities as well as the challenges faced during baseline data collection. Two weeks before interviews were scheduled, members of the data collection team re-contacted school administrators or CBO representatives, with a list of participants surveyed from their school or area at baseline, in order to identify VYAs still living in the area or attending the school and available to be interviewed. School administrators and CBOs were then contacted by phone to provide the list of participants still available and to establish times and dates for survey administration. School administrators and CBOs were also asked to gather information about participants that had moved, left school, or moved homes in order to help reach those participants. All identified participants were invited to participate in Wave 2 using the same data collection procedures as baseline, with 2,629 re-interviewed at Wave 2 and 2,533 matched to baseline respondents.

DATA COLLECTION PROCEDURES

Data collection was conducted using face-to-face interviews with an interviewer, with sensitive questions administered using Audio Computer-Assisted Self-Interview (ACASI) to promote privacy. Whenever possible, interviewer and respondent sex was matched. The interviews on average took 1.5 hours including time for at least two breaks. For the adolescents who were reached through initial school and CBO contact, the interviews were organized by school and classroom for in-school participants and in community spaces (church, association spaces, or school spaces) for out-of-school VYAs. For participants reached through active searches, interviews were conducted at homes in a quiet space out of earshot from their parent or guardian. Each interviewer conducted a maximum of two interviews per day, and in the case of group interviews the number of data collectors sent was proportional to the number of expected participants.

Interviews were conducted in Lingala using tablets and uploaded to the SurveyCTO server. Data collectors received four days of refresher training on the questionnaires and a pretest prior to data collection.

SECTION 1: GEAS WAVE 3 OBSERVATIONAL STUDY RESULTS (CONTROL GROUP)

SOCIODEMOGRAPHIC CHARACTERTICS

Altogether, 20 in-school boys (5%) and 30 in-school girls (7%) dropped out of school between Waves 2 and 3, while 20 out-of-school boys (14%) and 20 out-of-school girls (15%) resumed school. The school-stratified samples reflect adolescents' school status at the time of baseline survey.

Age, literacy, and wealth index all increased from over the study period for in-school and out-of-school samples.

The median age in Wave 3 was just under 14 years among both in-school and out-of-school adolescents (Figure 3). The literacy rate (measured by the ability to read a simple sentence) increased by about 3% for in-school boys and girls from Wave 2 for an overall increase of about 6% over the study period (Figure 4). However, the out-of-school group had a greater increase from Wave 2 (13% for boys and 21% for girls) for a total 22% increase for boys and 26% increase for girls. The gender gap remained about the same for in-school adolescents throughout the study period (literacy rates were about 7% higher for boys than girls) but the gap fluctuated among out-of-school adolescents. While the gap between out-of-school girls and boys widened from baseline to Wave 2 (4% to 10%), the gap virtually closed between Wave 2 and Wave 3 (65% of boys and 63% of girls were literate). Though the literacy gap between in-school and out-of-school adolescents closed slightly, it remained wide across the study period, with 25% more in-school adolescents than out-of-school adolescents' literate at Wave 3 (89% vs. 64%).

Figure 3

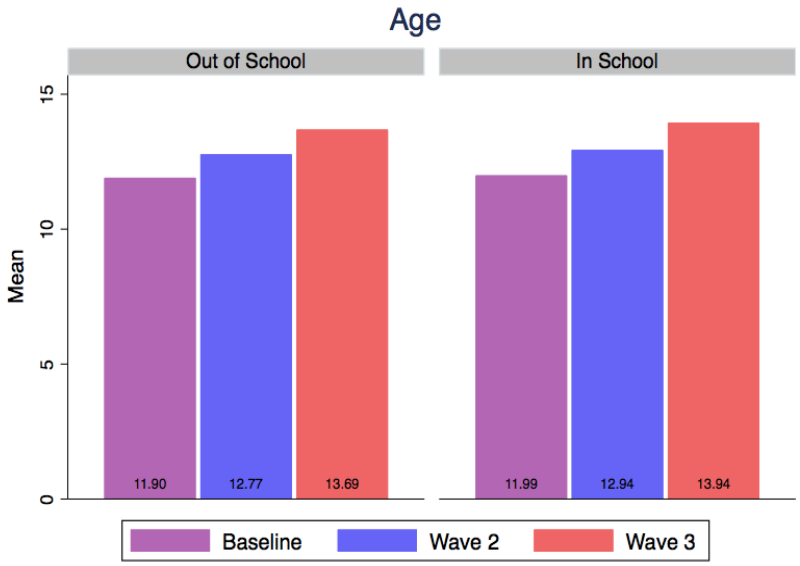
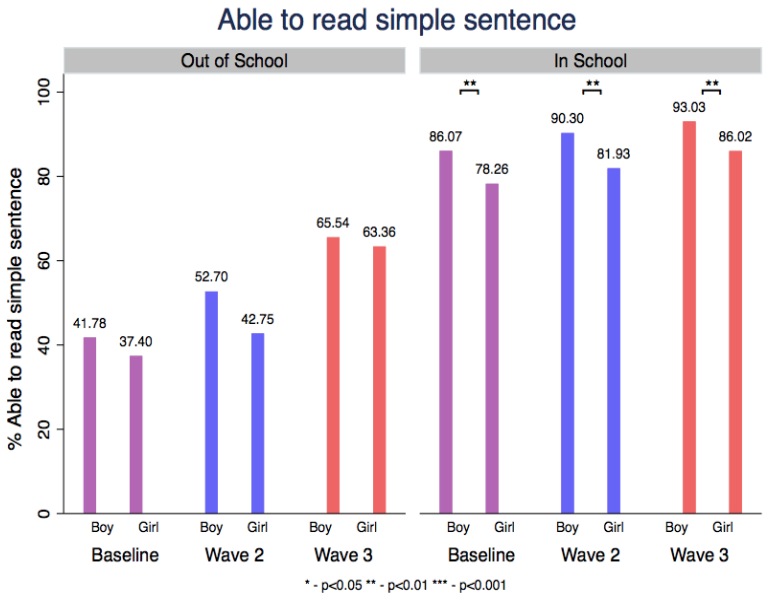
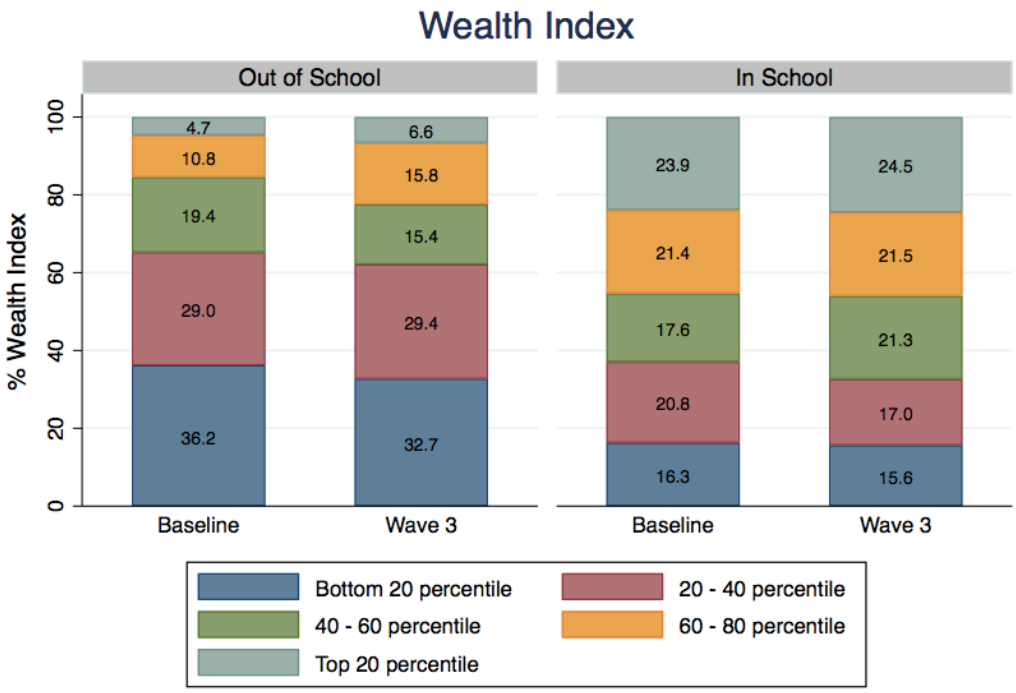


Figure 4



The wealth index was evaluated at baseline and in Wave 3, allowing for a comparison across the study period (Figure 5). Both in-school and out-of-school adolescents showed a slight increase in wealth index, with an increase of 4% of in-school above the 40th percentile and an increase of 3% for out-of-school. However, the wealth gap between in-school and out-of-school was maintained (33% of in-school adolescents lived below the 40th percentile in Wave 3, compared to 62% of out-of-school adolescents).

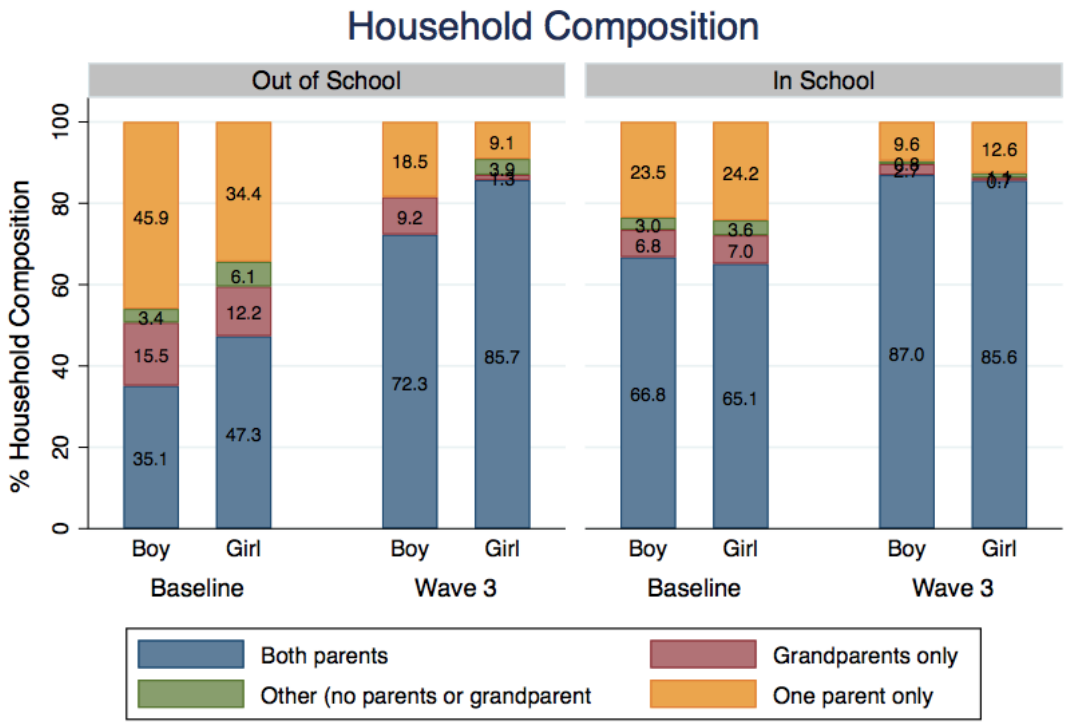
Figure 5



FAMILY STRUCTURE

In Wave 3, 86% of in-school adolescents and 80% of out-of-school adolescents lived in two-parent households, which is a large increase from baseline (66% of in-school and 40% of out-of-school). This corresponds to a decrease in the number of adolescents living in single parent households (11% of in-school and 13% of out-of-school) and those living with grandparents or other non-parent guardians (Figure 6).

Figure 6



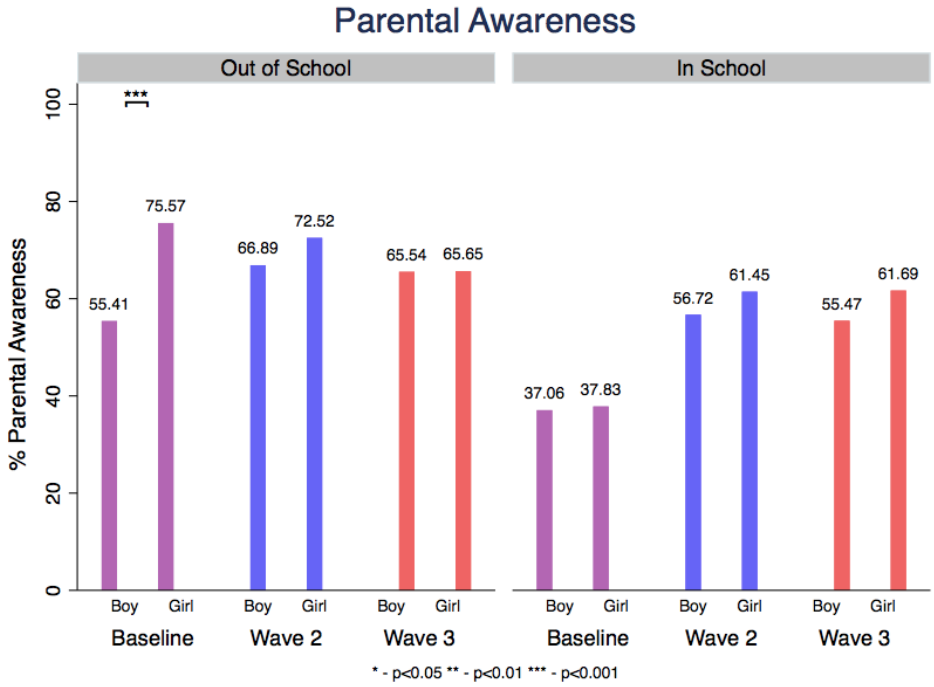
Caregiver connectedness was assessed using adolescents' perceptions about their relationship with their caregiver. Among in-school adolescents in Wave 3: 62% indicated that they felt close to their caregiver and 73% indicated they felt that their caregiver cared a lot about what they thought. Among out-of-school adolescents, connectedness to caregiver was comparatively lower (57% and 69% respectively). Caregiver connectedness remained relatively constant across the study period, with fluctuations within 5% for each time point within the cohorts.

In Wave 3, out-of-school adolescents reported more caregiver monitoring (as defined by caregiver awareness about who adolescents' friends are, their whereabouts, and school performance for in-school participants) than in-school adolescents, with 66% indicating high monitoring versus 59% of in-school adolescents (though the indicators for in-school and out-of-school adolescents are not directly comparable). Girls reported more caregiver monitoring than boys among in-school adolescents (62% vs. 55%, respectively, although the difference was not statistically significant), and no difference was reported for out-of-school adolescents (Figure 7).

Throughout the study period, monitoring increased from baseline to Wave 2 for in-school and out-of-school adolescents. However, rates decreased for out-of-school adolescents between Wave 2 and Wave

3, with a larger decrease for girls than boys (-7% and -1% respectively), thus closing the gender gap present in baseline and Wave 2. Rates remained stable for in-school adolescents in the same time period for both boys and girls, though a gender gap of about 6% persisted between the two time points.

Figure 7



PEERS

About half of in-school adolescents and two thirds of out-of-school adolescents reported only having friends of the same sex in Wave 3 (53% and 63% respectively). Boys consistently had higher rates of reporting opposite sex friends across the study period, with the widest gap between out-of-school boys at 35% and out-of-school girls at 29% (Figure 8). Both in-school and out-of-school adolescents seemed to spend more time with friends in Wave 3 than in Wave 2, but less time than at baseline (Figure 9).

Figure 8

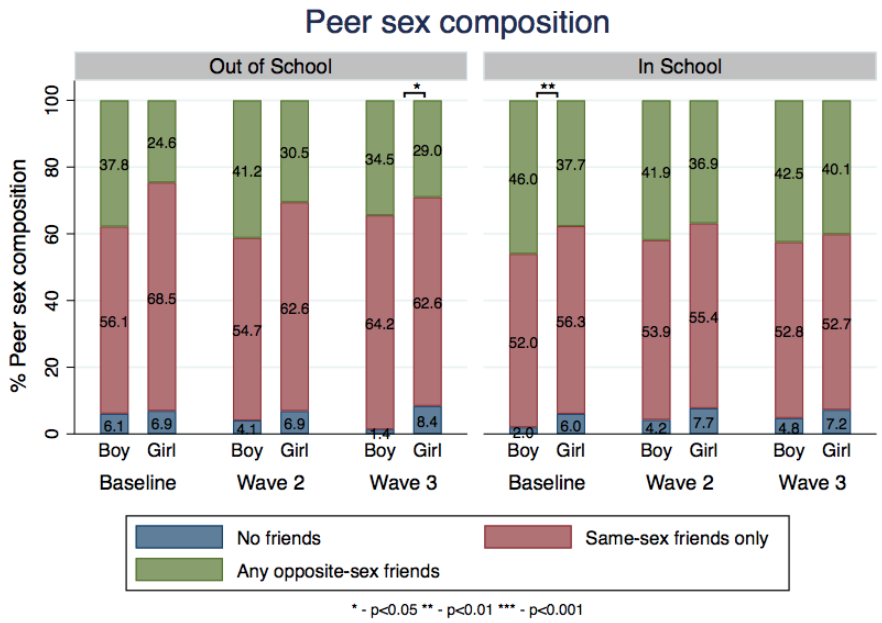
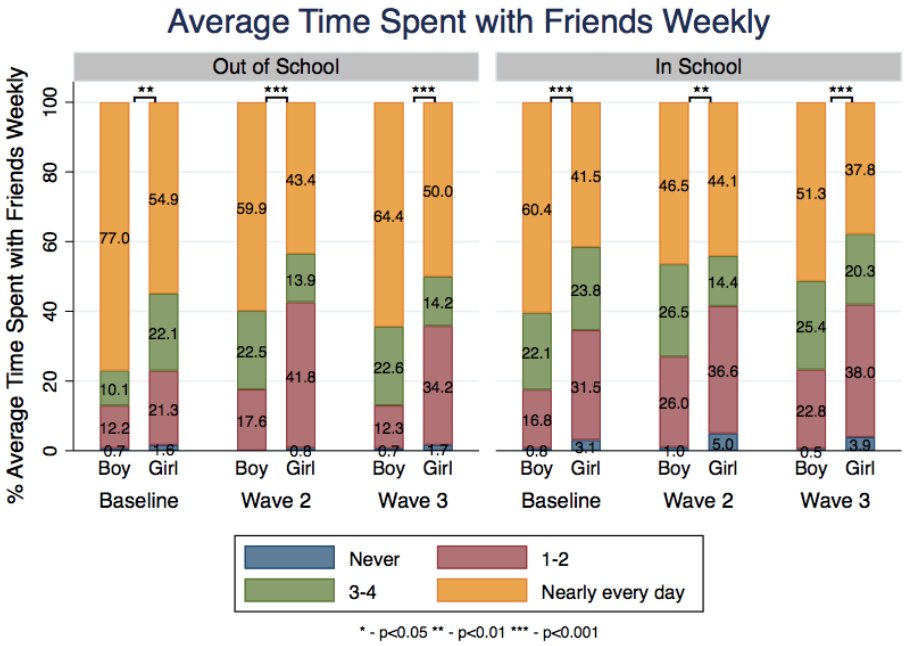


Figure 9



In Wave 3, a majority of adolescents believed that their peers thought that attending school regularly was important, ranging from 76% among out-of-school boys to 89% among in-school girls. In-school girls have also had the largest increase across the three time points, with a total 16%-point increase from baseline to Wave 3. In-school boys and out-of-school boys also progressively increased since baseline (+14% and +16% points, respectively), while out-of-school girls had a slight decrease from Wave 2 to Wave 3 (-1% point).

Very few adolescents believed their peers had smoked, with a slight increase for in-school adolescents (<1%) (Figure 10). Few adolescents believed peers drunk alcohol, though in-school boys perceived increased peer use of alcohol from Wave 2 (+2%) and out-of-school boys saw a decrease (-4%) (Figure 11). Meanwhile perceived use of peer alcohol consumption remained relatively stable for girls.

Figure 10

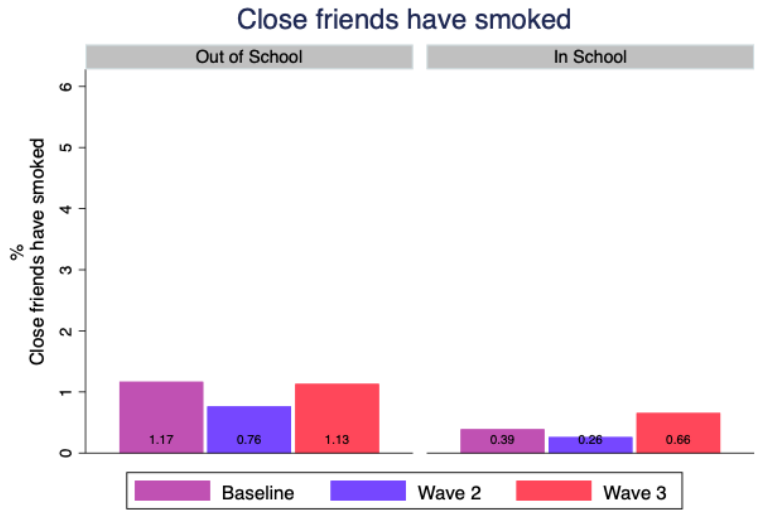
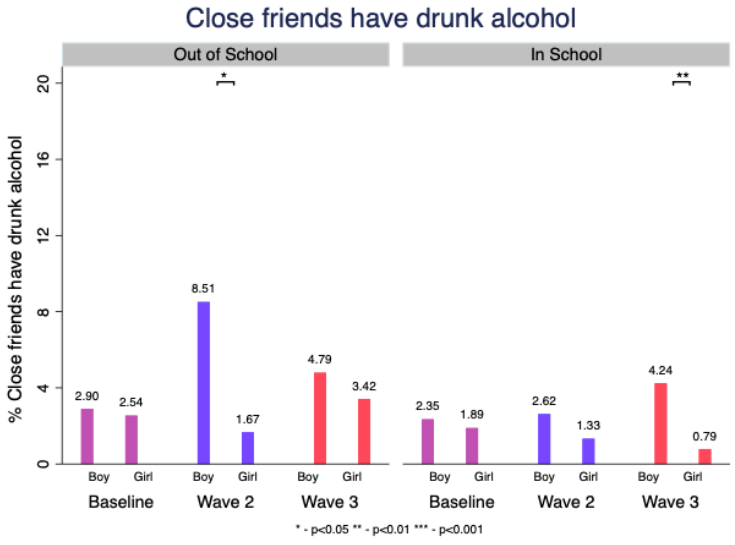


Figure 11



Across the study period, most adolescents believed their peers did not consider engagement in sexual activity or romantic relationships to be very important (Figure 12). However, an increasing percentage of in-school and out-of-school adolescents believed their peers thought it important to have a boyfriend or girlfriend (Figure 13).

Figure 12

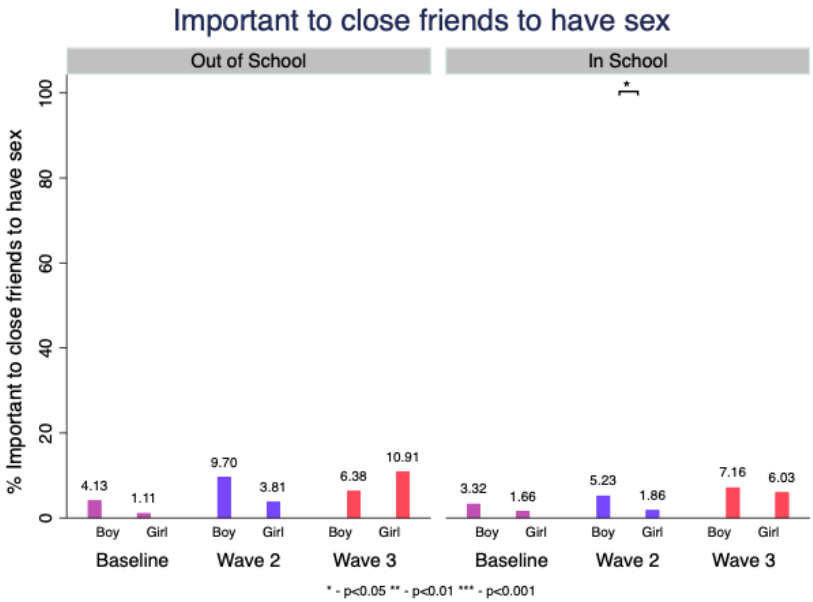
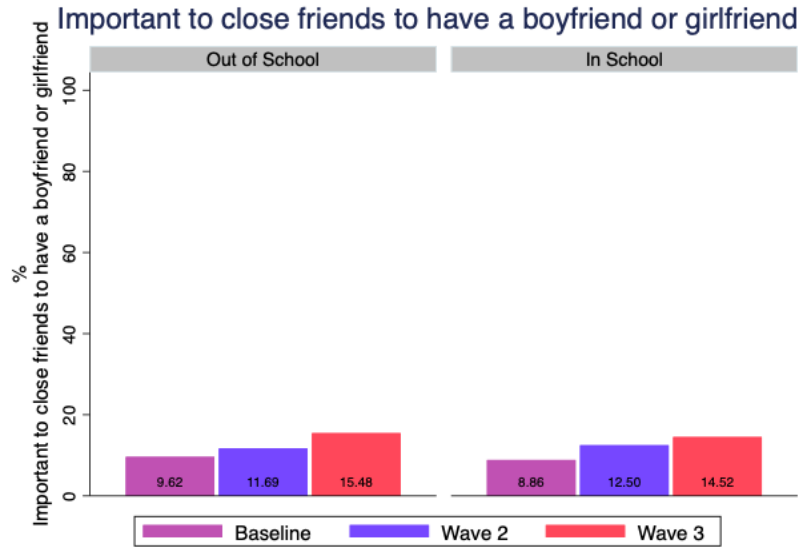


Figure 13

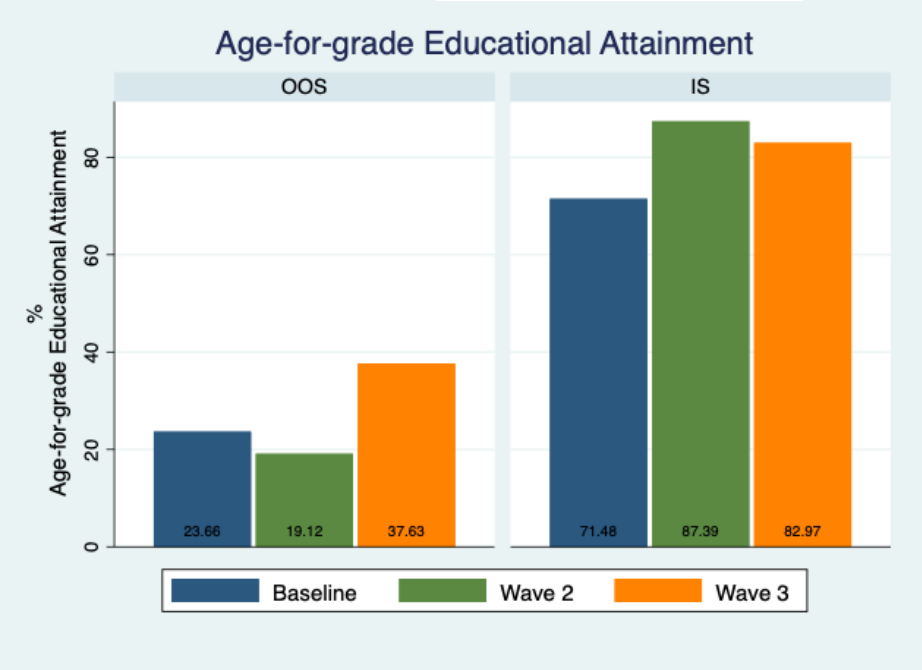


SCHOOL

Age-for-grade educational attainment was assessed for in-school adolescents (Figure 14). In Wave 3, 85% of in-school boys and 81% of in-school girls were at or above their appropriate grade level, which is a decrease from Wave 2 (-3% and -6%, respectively). This is explained by the school dropout rate, which was 5% for in-school boys and 7% for in-school girls. Among out-of-school adolescents, more went back to school between Wave 2 and Wave 3 (14%) than between baseline and Wave 2 (9%).

Educational aspirations remained about the same from Wave 2 to Wave 3, with 91% of boys and 90% of girls expecting to complete a university degree.

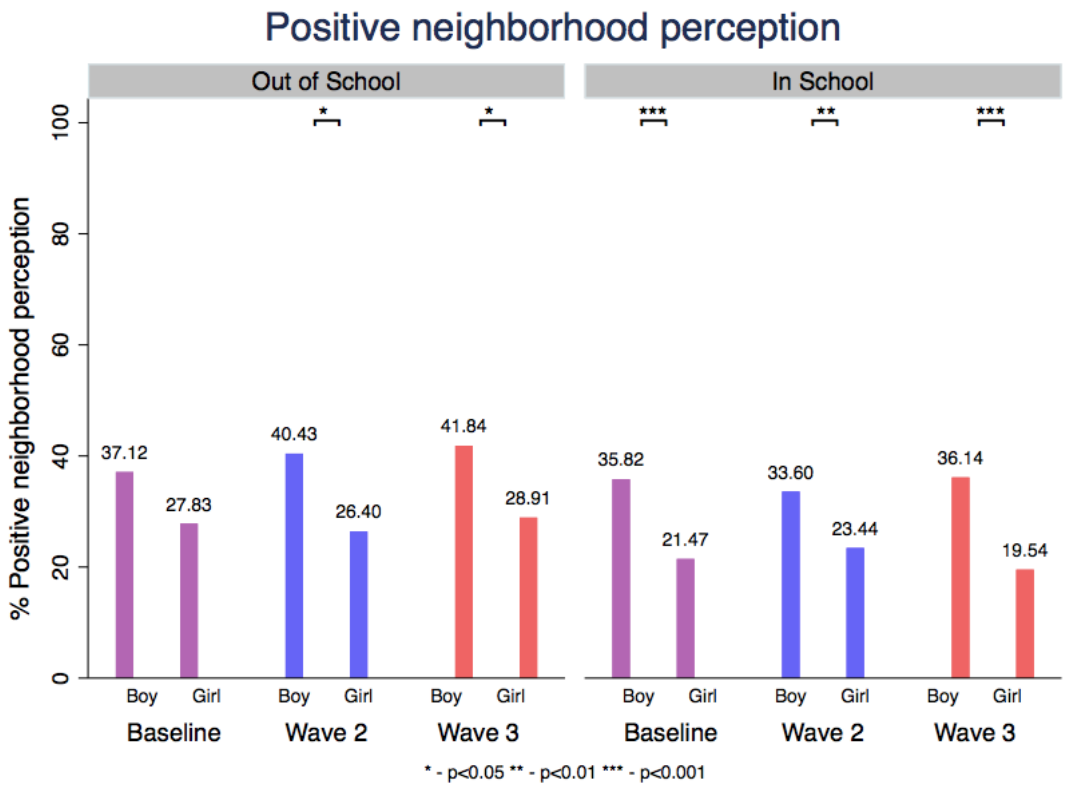
Figure 13



NEIGHBORHOOD

Adolescents responded to 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.

Figure 14

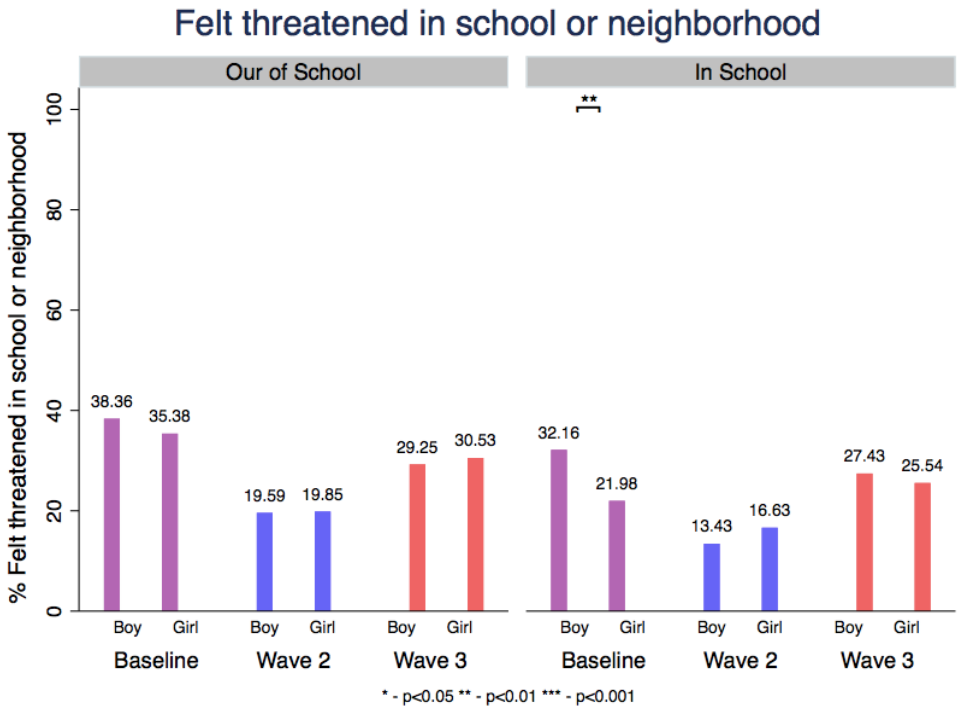


At Wave 3, overall perceptions of neighborhood cohesion indicated that a minority of participants had a positive perception of their neighborhood (Figure 15). Persistent across all three time points was that boys had a more positive neighborhood perception than girls (36% versus 20% among in-school adolescents and 42% versus 29% among out-of-school adolescents).

Perceived social control remained relatively constant across the three time points for in-school adolescents, with a slight increase for out-of-school adolescents. Among in-school adolescents, gender differences reversed between baseline and Wave 3, with more boys feeling control than girls at baseline, but more girls feeling control at Wave 3. This was not seen among out-of-school adolescents, where girls persistently perceived lower social control than boys between Wave 2 and Wave 3.

A majority of adolescents did not feel in danger in their neighborhood, with 74% of in-school adolescents and 70% of out-of-school adolescents reporting not feeling threatened in their school or neighborhood (Figure 16). When examining further, Wave 3 results show that girls feel less safe than boys, as 28% of in-school and 29% of out-of-school girls agree that there are safe places for girls in their neighborhood, compared to 57% of in-school and 54% of out-of-school boys agreeing there are safe places for boys.

Figure 15



VIGNETTE-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.

Adolescents generally adopted an indirect style of communication to approach romantic interests, with girls more likely to engage in indirect/avoidance style (e.g., waiting for someone else to initiate a conversation) than boys. However, both in-school boys and girls trended toward more direct behavior across the study period. Out-of-school boys became more direct, while girls maintained more consistent indirect/avoidance behavior.

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 (a scale that assessed whether adolescents considered romantic relationships between boys and girls in adolescence normal) and the existence of a "sexual double standard" with respect to the social consequences of engaging in romantic relations, wherein boys are socially rewarded for romantic and sexual activity while girls are penalized. Both scales are rated from 1 to 5, with higher scores reflecting greater endorsement.

Gender-Stereotypical Traits

Stereotypical traits of toughness versus vulnerability were widespread with more than 8 out of 10 adolescents endorsing a number of gender unequal representations. As in previous waves, "Boys should be able to show their feelings without fear of being teased" continued to receive the lowest level of endorsement in Wave 3 and increased among female respondents to three-fourths indicating the affirmative, (75% among in-school and 78% among out-of-school girls). The other difference that persisted between Wave 2 and Wave 3 is the belief that girls need more protection than boys, with 90% of in-school girls agreeing compared to 80% of in-school boys, and 91% of out-of-school girls compared to 75% of out-of-school boys.

Challenging Gender atypical roles

Beliefs about gender roles seemed to persist across the study period, with about two thirds of boys and girls believing it is acceptable to tease someone who acts like the opposite gender (Figures 17 and 18). These beliefs were strongest regarding a boy who acts like a girl, with 66% of in-school adolescents and 68% of out-of-school adolescents agreeing it is ok to tease them.

Figure 16

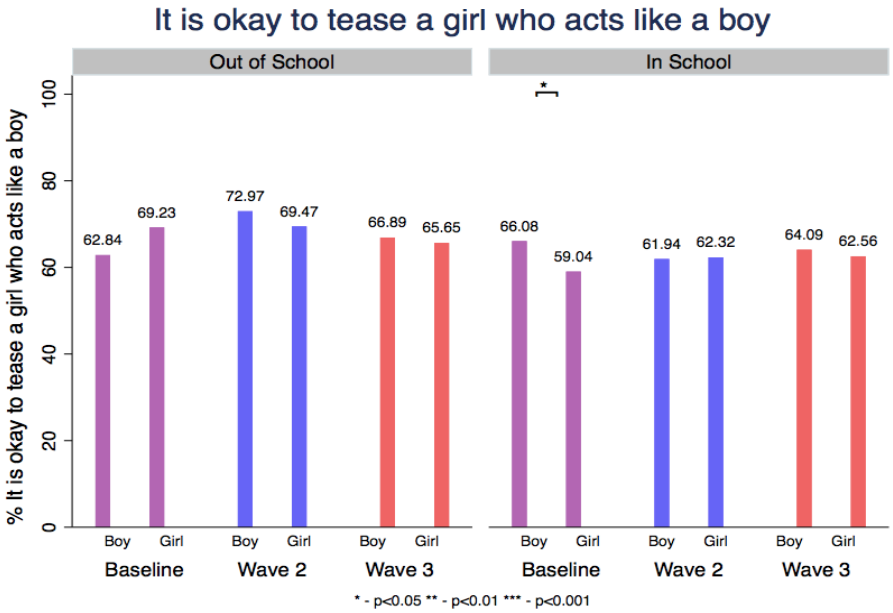
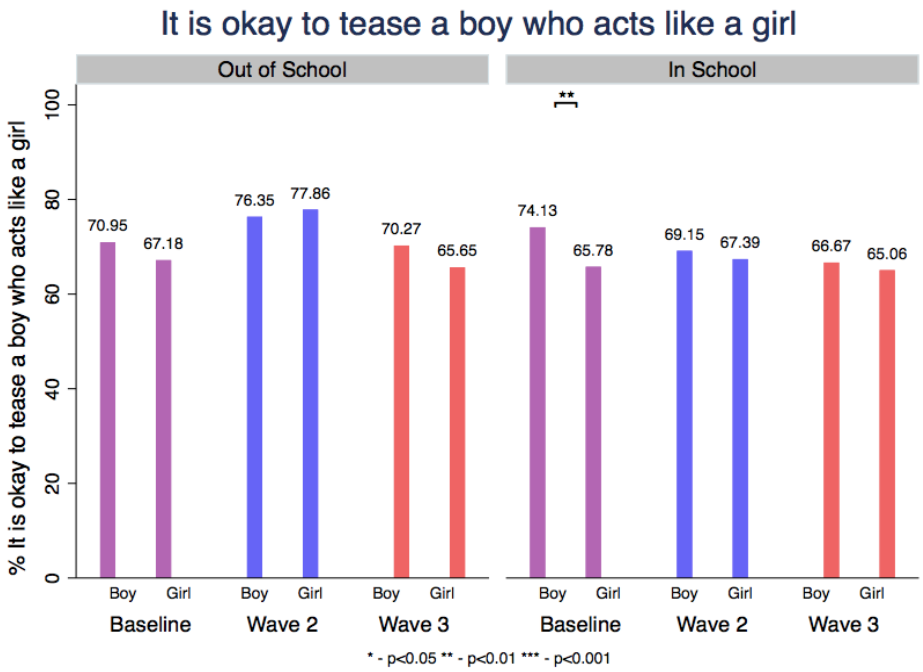


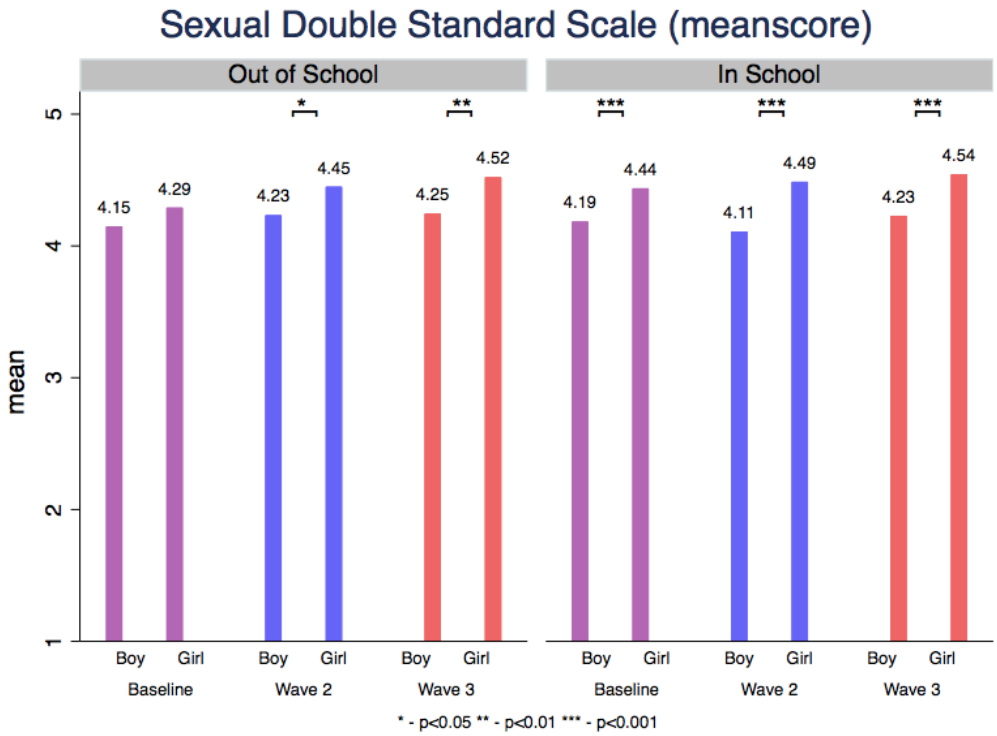
Figure 17



Gender Norms about Relationships

With a mean score of 3.14 and 3.17 for in-school and out-of-school boys and of 3.26 for and 3.27 for in-school and out-of-school girls (on a scale from 1 to 5), results suggest nuanced perceptions about romantic involvement during adolescence, bending toward acceptance for all study adolescents. The acceptability of romantic relations grew throughout the study period for in-school adolescents, while out-of-school adolescents decreased slightly from 3.23 in Wave 2 to 3.17 in Wave 3. While acceptance of romantic relations increases, the perceptions of a sexual double standard continued to increase rewarding boys but sanctioning girls for their romantic engagement (Figure 19). Perceptions of such unequal expectations grew over time especially among girls (4.54 for in-school girls and 4.52 for out-of-school girls).

Figure 18



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. The decision-making scale 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. 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.

Adolescents showed differing degrees of agency according to their freedom of movement, their ability to be heard (voice) and their ability to make decisions in their daily life (decision-making). Out-of-school adolescents believed their voice increased throughout the study period with a score of 2.66 in Wave 3, while fewer in-school adolescents believed they had voice in Wave 3 than in Wave 2 (-0.02) (Figure 20). All adolescents reported greater ability to make decisions on their own, with the greatest increase for out-of-school adolescents (+0.31 for out-of-school boys and +0.28 for out-of-school girls). Freedom of movement increased for all adolescents, with the greatest increase for in-school girls (+0.20) and out-of-school boys (0.23) (Figure 21). In Wave 3, adolescents had the highest scores for decision making power (mean scores of 2.86 and 2.92), followed by voice (mean scores of 2.69 and 2.66) and then freedom of movement (1.78 and 1.90).

Figure 19

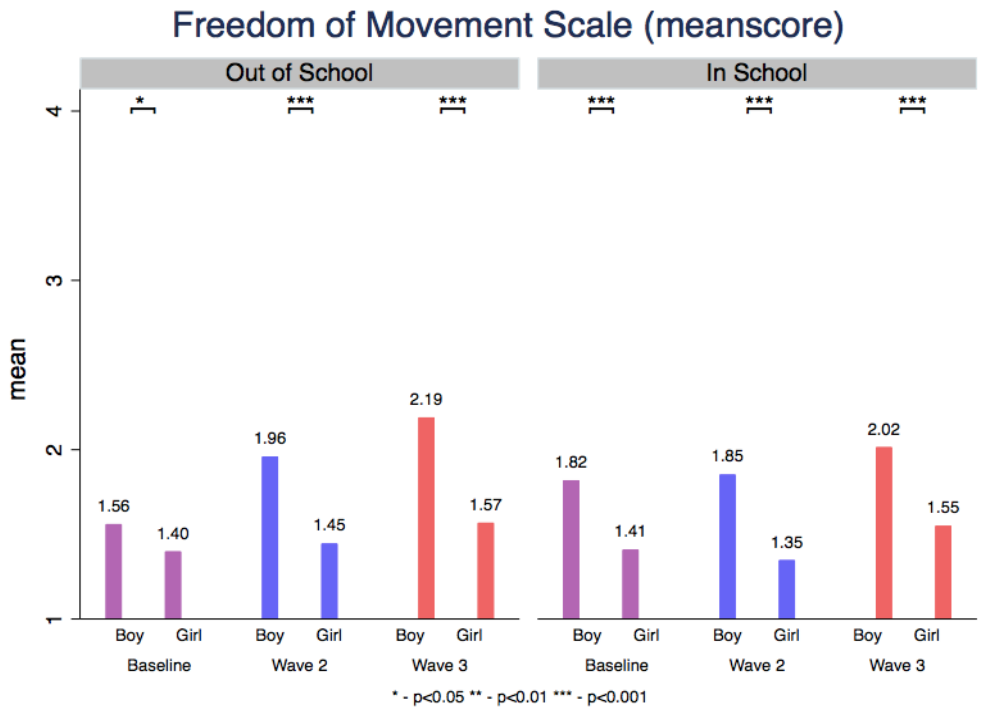
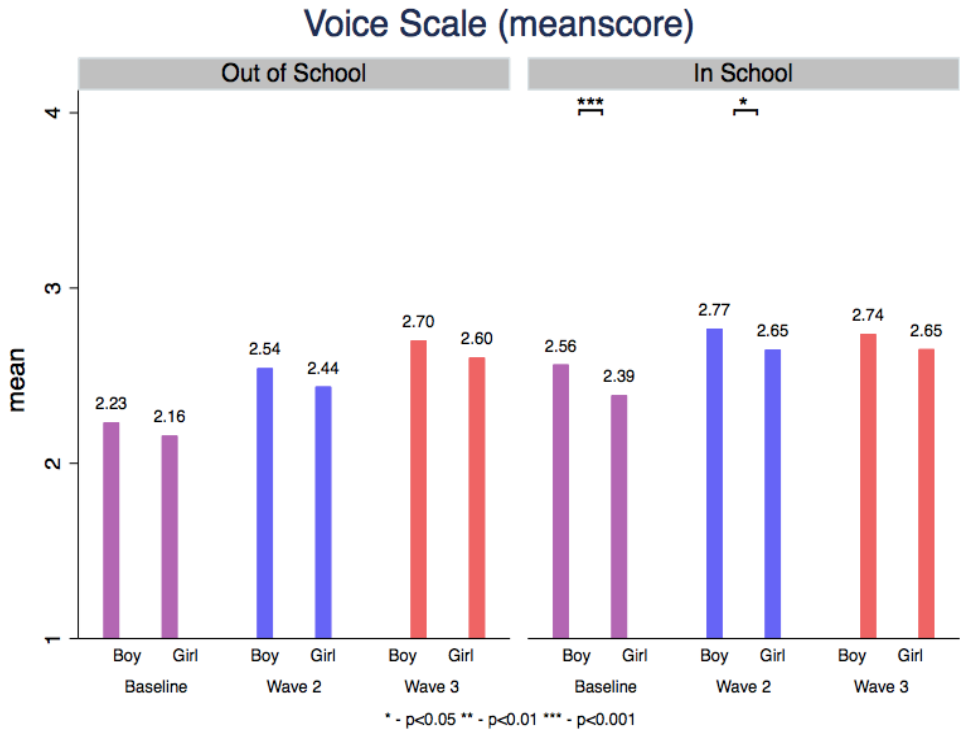


Figure 20



BULLYING & VIOLENCE

The GEAS explores experiences of bullying and physical interpersonal violence in the past 6 months. Specifically, we evaluated the incidence of psychological bullying and physical violence victimization in the last 6 months, as well as the perpetration of violence in the last 6 months.

Teasing and physical bullying in the last six months were common experiences among in-school and out-of-school adolescents alike, with rates of 28% of in-school and 30% of out-of-school adolescents (Figure 22). However, rates decreased for all adolescents, especially for girls (-4% for in-school and -13% for out-of-school). The gender gap seen in Wave 2 widened for both in-school and out-of-school adolescents in Wave 3. More than one in five boys reported violence perpetration (Figure 23) and a similar share reported victimization (Figure 24) involving peers in the last six months while these experiences were shared by 14 and 16% of in-school and out-of-school girls.

Figure 21

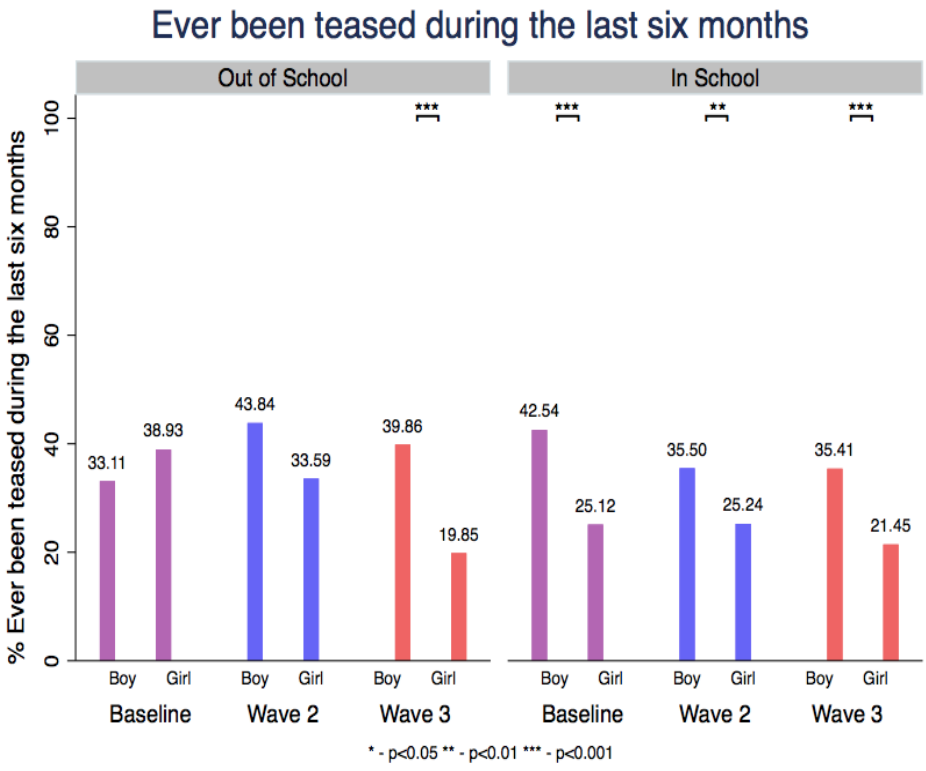


Figure 22

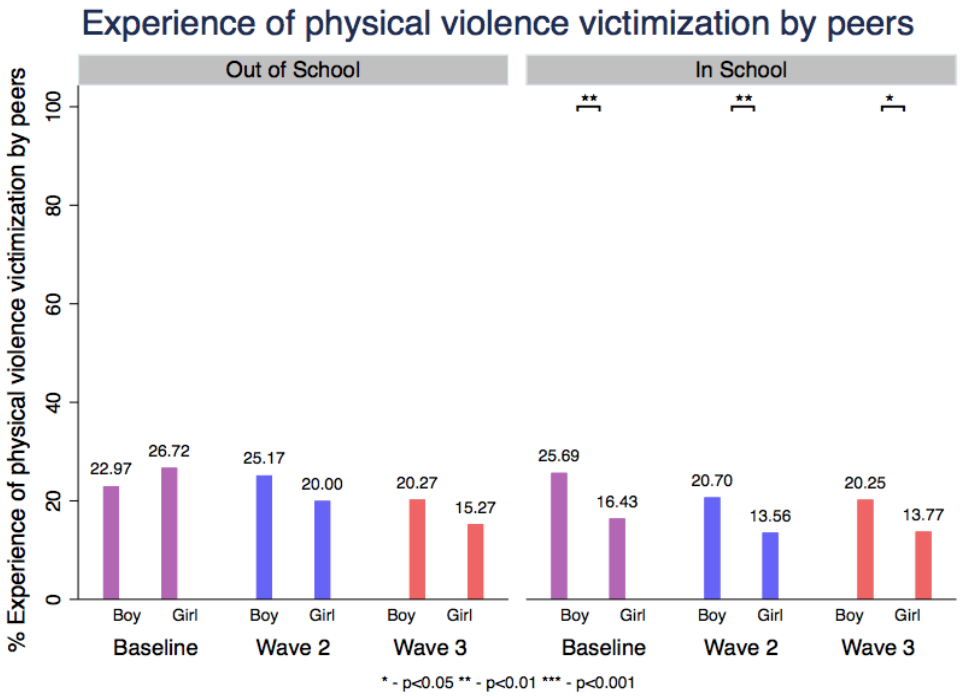
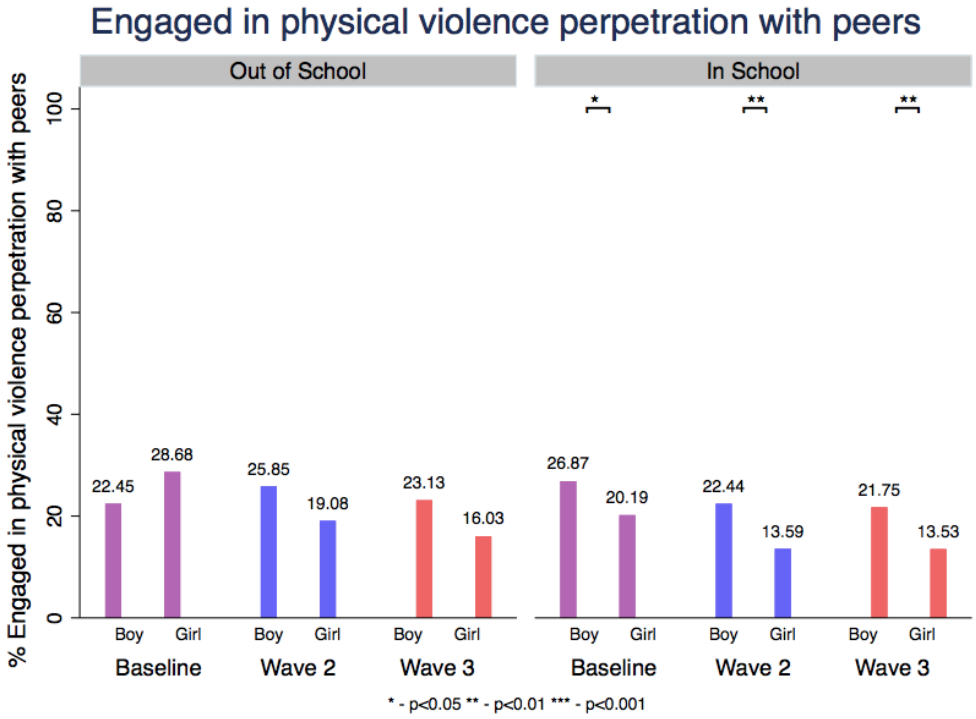


Figure 23

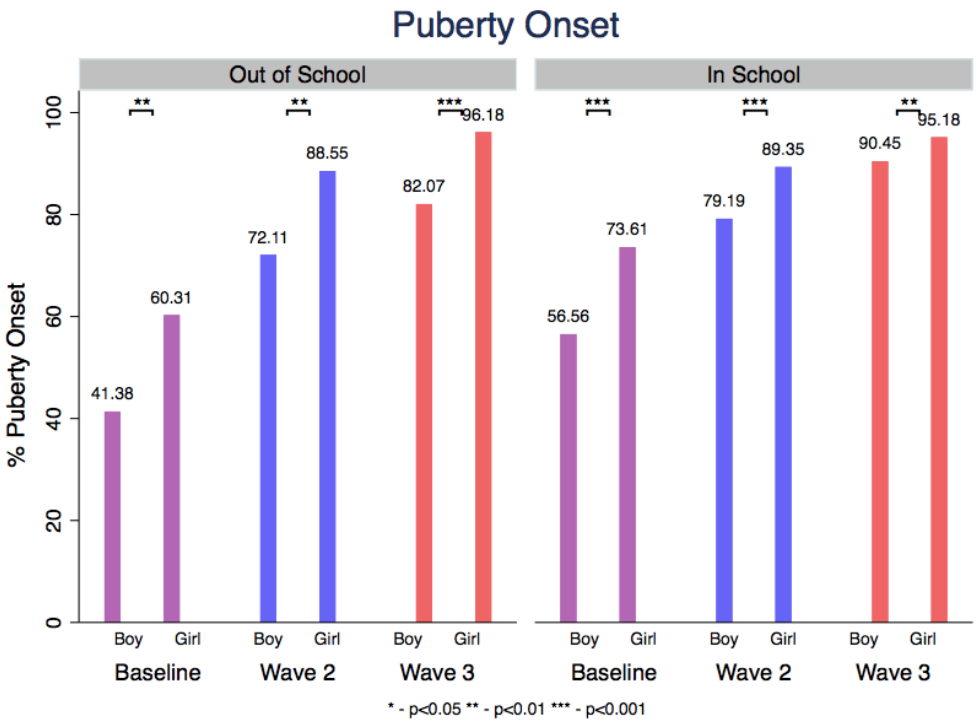


OVERALL HEALTH AND BODY COMFORT

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 seven questions assessed young people's level of comfort with their own bodies at baseline and five questions were asked at Waves 2 and 3. These questions were summarized in a single indicator assessing the percentage of adolescents that felt satisfied with their body image.

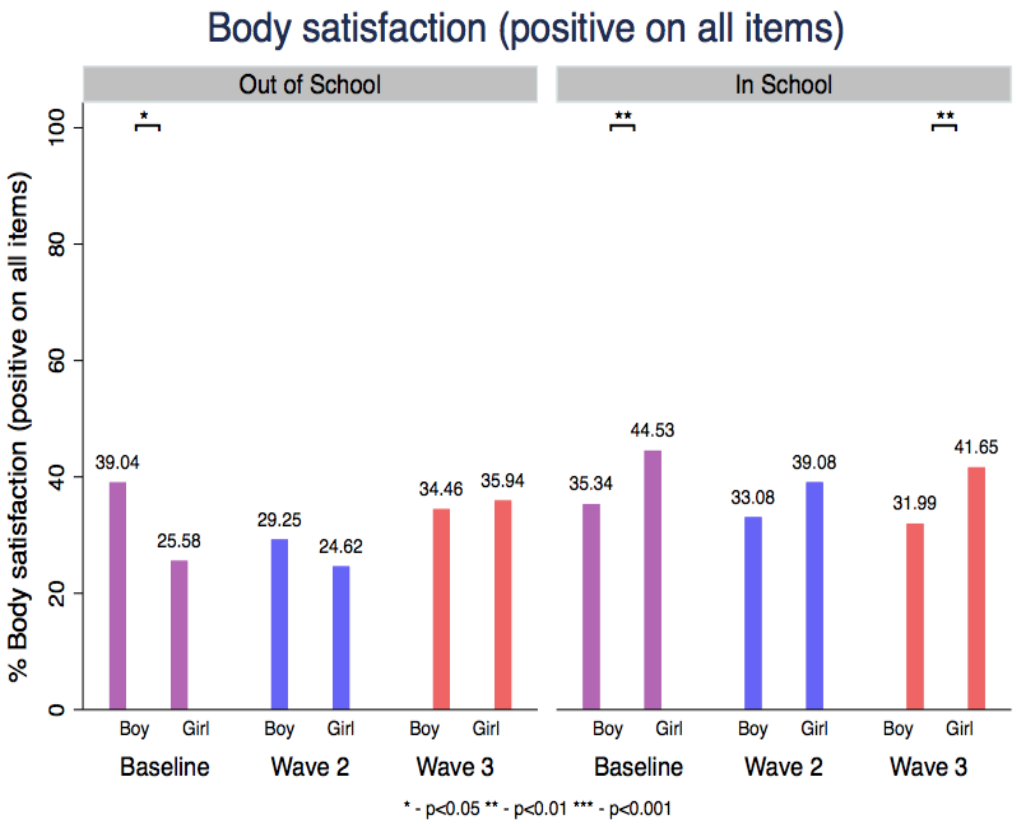
Nine out of ten adolescents had experienced pubertal onset, with more rapid transitions for girls than boys (95% of in-school and 96% of out-of-school girls had experienced pubertal onset versus 90% of in-school and 82% of out-of-school boys) (Figure 25). The increase in pubertal maturation was larger between baseline and Wave 2 than between Wave 2 and Wave 3 (+19% vs +8% in in-school adolescents and +30% vs +9% in out-of-school adolescents). Out-of-school boys had the lowest rate of pubertal onset at 82%, while all other groups ranged from 90-96%.

Figure 24



In Wave 3, one third of all adolescents expressed consistent positive attitudes about their body image, which was consistent with Wave 2 for in-school adolescents but an increase of 8% for out-of-school adolescents (Figure 26). In-school girls had the highest rates of positive body image at 42% compared to 32% of in-school boys, while out-of-school boys and girls had the same body image perceptions.

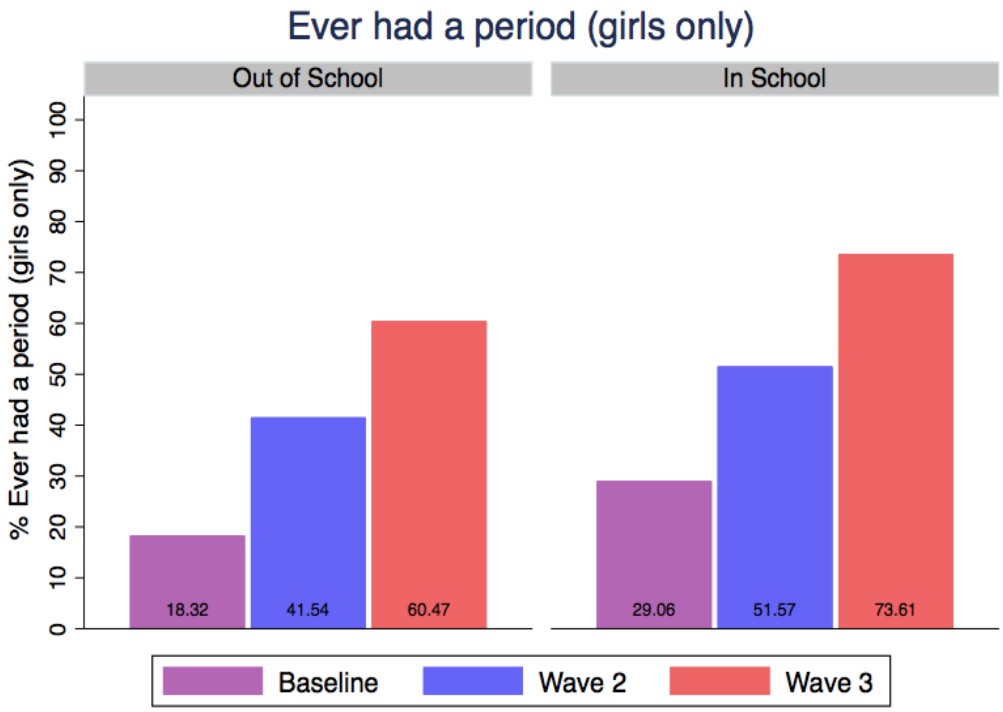
Figure 25


Body satisfaction (positive on all items)
Out of School
In School
% Body satisfaction (positive on all items)
0
20
40
60
80
100
*
**
**
39.04
25.58
29.25
24.62
34.46
35.94
35.34
44.53
33.08
39.08
31.99
41.65
Boy
Girl
Baseline
Wave 2
Wave 3
* - p<0.05 ** - p<0.01 *** - p<0.001

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. In Wave 3, three fourths of in-school girls had ever had a period compared to two thirds of out-of-school girls (Figure 27). This represents about a 43% increase from baseline for both groups, though the gap between in-school and out-of-school widened in Wave 3 from 10% to 14%. Significantly more out-of-school girls had shame of their periods than in-school girls in Wave 3 (44% versus 29%), which also corresponds to greater knowledge of self-care for in-school girls.

Figure 26



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 6 questions including "In general, seeing self as a happy person", "worrying for no good reason", "blaming self when things go wrong", "being too unhappy to sleep at night", "feeling sad", and "thinking of harming self". In addition, Wave 2 includes the validated Patient Health Questionnaire (PHQ9) measure of depressive symptoms and the Generalized Anxiety Disorder-7 (GAD-7) scale. We report on validated PHQ 9 and GAD 7 measures for Wave 2 results and also report on the GEAS depressive symptoms score to investigate trends in the report of depressive symptoms over time.

Depressive symptoms were higher for out-of-school than in-school adolescents, with the highest score for out-of-school girls (2.22). Out-of-school adolescents had consistent increases in depressive symptoms across the study period, while in-school adolescents remained relatively stable from Wave 2 to Wave 3.

According to the PHQ9 measure of depressive symptoms, the mean of summed depression score was higher for out-of-school adolescents than in-school adolescents (4.26 vs. 3.39) (range of 0 to 30). Among out-of-school adolescents, the mean of summed score of depression was higher for girls than boys (5.22 vs. 3.41), though out-of-school girls saw a decrease in mean score from Wave 2 to Wave 3 while out-of-school boys saw an increase. The opposite was true for in-school adolescents, with boys decreasing mean score and girls increasing.

Alcohol consumption remained rare in Wave 3, ranging from 5% among in-school girls to 15% among in-school boys (Figure 28). Though previous rounds had more out-of-school boys drinking than in-school boys, this reversed in Wave 3, while more alcohol consumption continued to be reported among in-school than out-of-school girls. Cigarette consumption remained very rare in Wave 3, ranging from 0% of out-of-school girls to 2.7% of out-of-school boys (Figure 29).

Figure 27

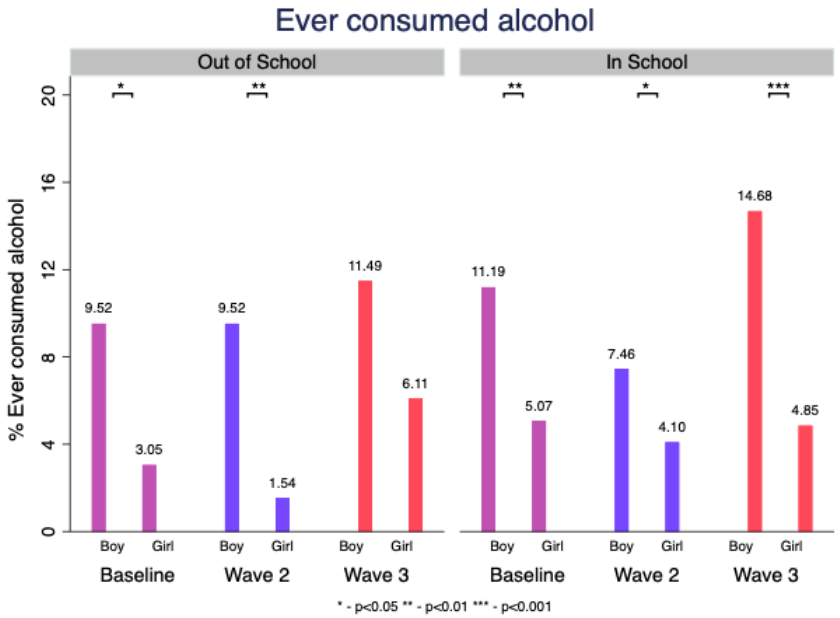
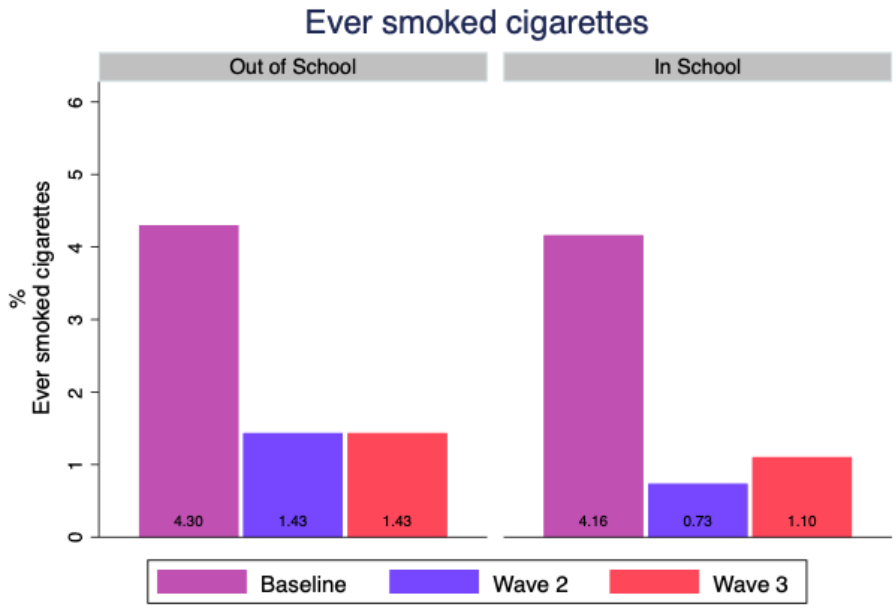


Figure 28


Ever smoked cigarettes
Out of School
In School
% Ever smoked cigarettes
0
1
2
3
4
5
6
4.30
1.43
1.43
4.16
0.73
1.10
Baseline
Wave 2
Wave 3

SEXUAL HEALTH KNOWLEDGE

Knowledge of pregnancy prevention was initially assessed through nine 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 9 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 addition, a series of questions on family planning awareness drawn from referent population-based studies, such as DHS and PMA2020, were included in Wave 3 for adolescents 15 years or older, in order to compare GEAS indicators with Kinshasa PMA2020 population-based estimations.

In Wave 3, adolescents' knowledge about pregnancy and HIV prevention was generally low, with overall scores reflecting close to 5 out of 9 correct responses for pregnancy prevention and a little over 2 out of 4 correct answers for HIV prevention (Figures 30 and 31). Boys scored higher than girls on knowledge about pregnancy prevention (5.23 and 4.95 for in-school and out-of-school boys versus 4.99 and 4.84 for in-school and out-of-school girls) and on knowledge about HIV prevention (2.45 or 2.36 for in-school and out-of-school boys versus 2.13 and 2.28 for in-school and out-of-school girls). Knowledge of pregnancy and HIV increased over the study period for all groups, though the increase was smaller between Wave 2 and Wave 3 or even declines for pregnancy prevention.

Figure 29

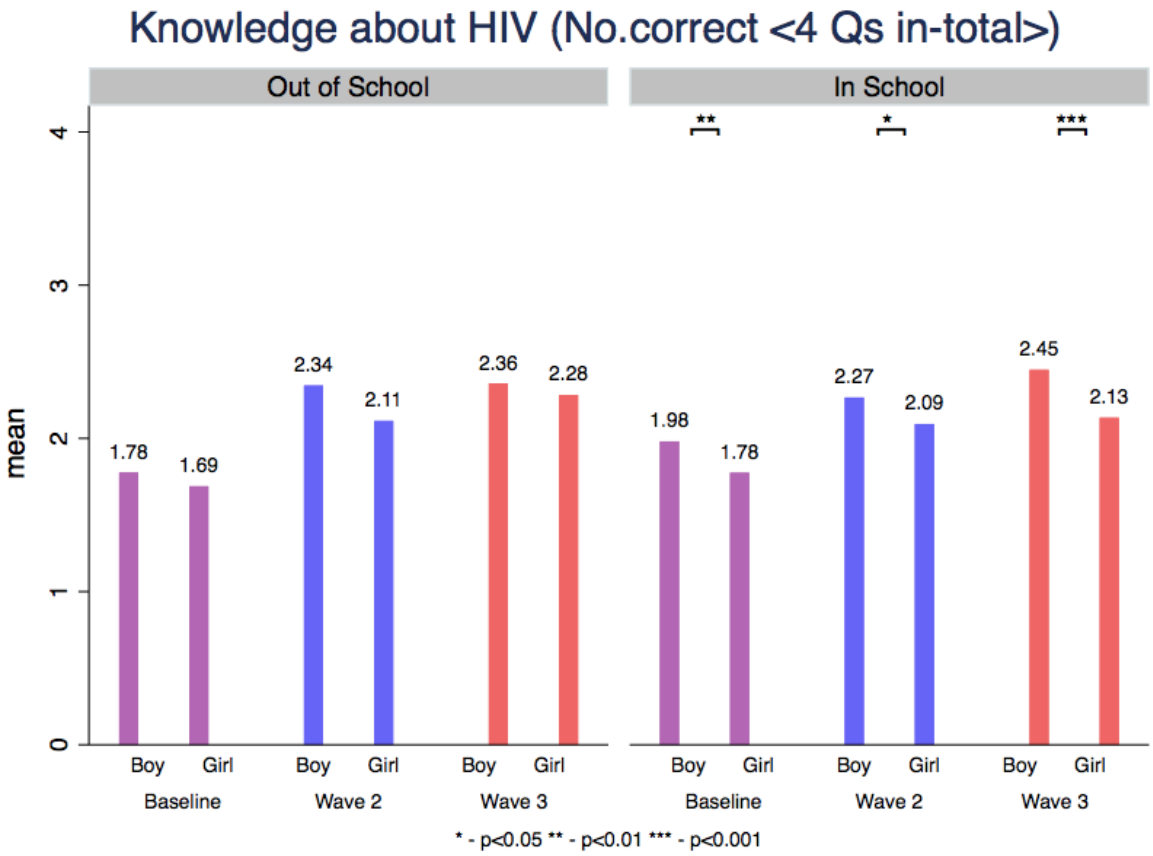
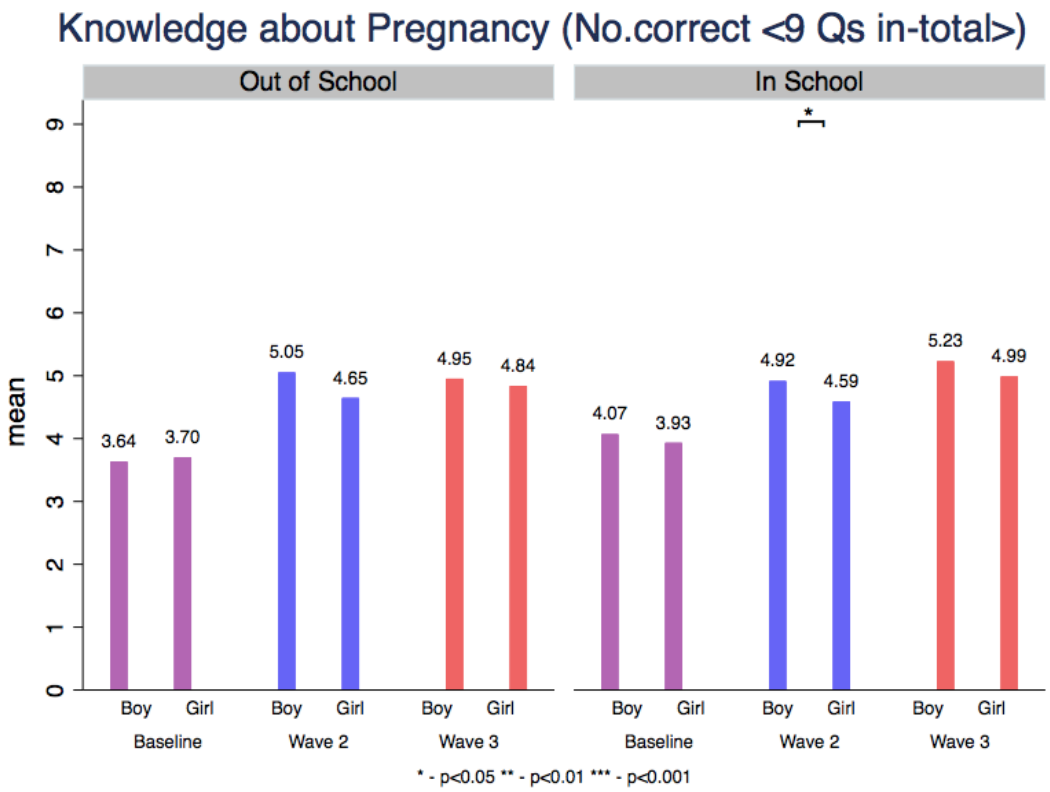


Figure 30



Adolescents also had little knowledge of SRH services. About half of adolescents knew where to get condoms, though more boys (64% of in-school and 57% of out-of-school) knew than girls (50% of in-school and 41% of out-of-school) (Figure 32). 62% of in-school girls compared to 57% of out-of-school girls knew where to get contraception (Figure 33). Awareness of SRH services increased over the study period, though the increase was greater for boys than for girls.

Figure 31

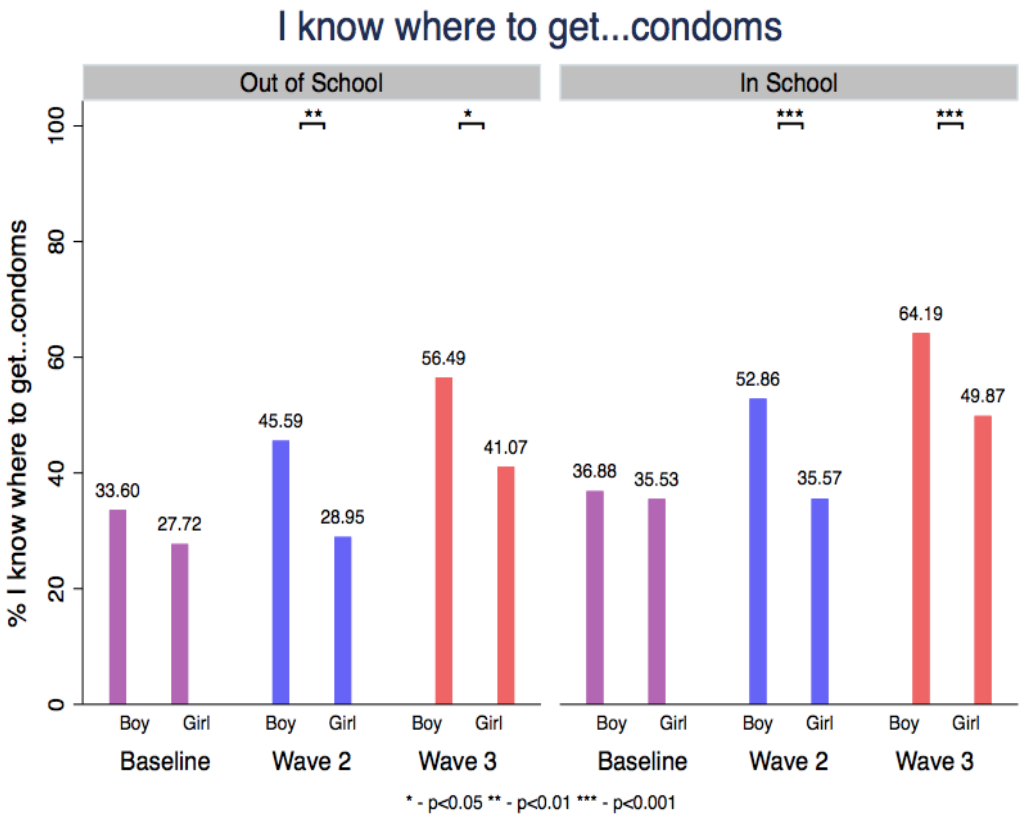
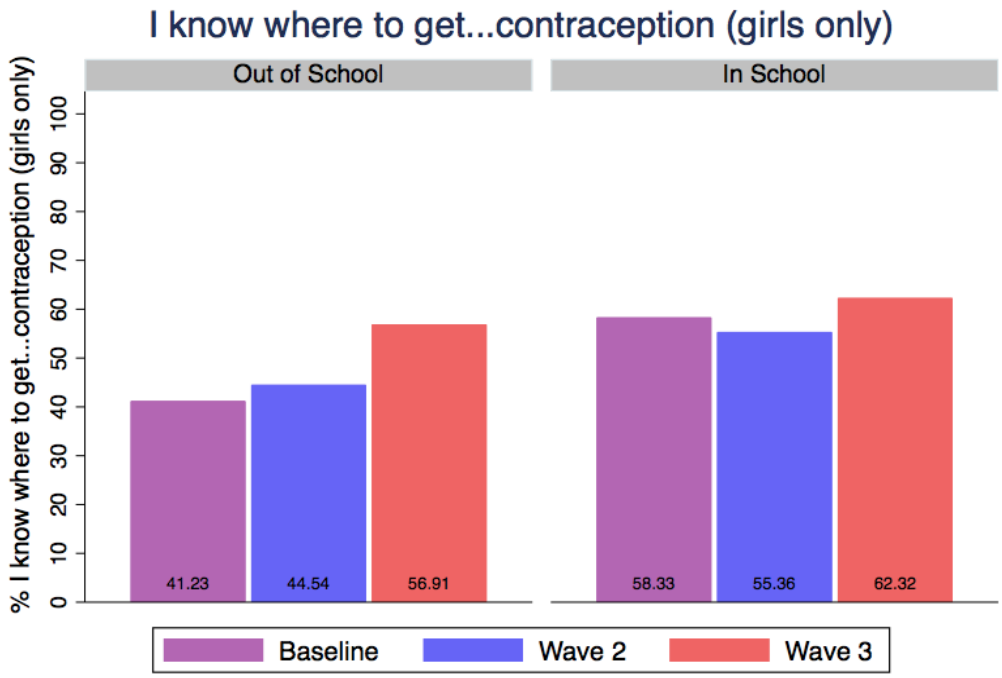


Figure 32



Among in-school adolescents, boys were more embarrassed than girls to get a condom if they needed it (79% vs. 69%, respectively), though the opposite was true for out-of-school adolescents (66% of boys vs 73% of girls). Girls felt more comfortable getting contraception than condoms, with 49% of in-school and 40% of out-of-school girls saying they are not embarrassed to go to a clinic to get contraception. Perceptions of stigma remained relatively stable across the study period, though in-school adolescents had a 4% increase in shame from Wave 2 to Wave 3.

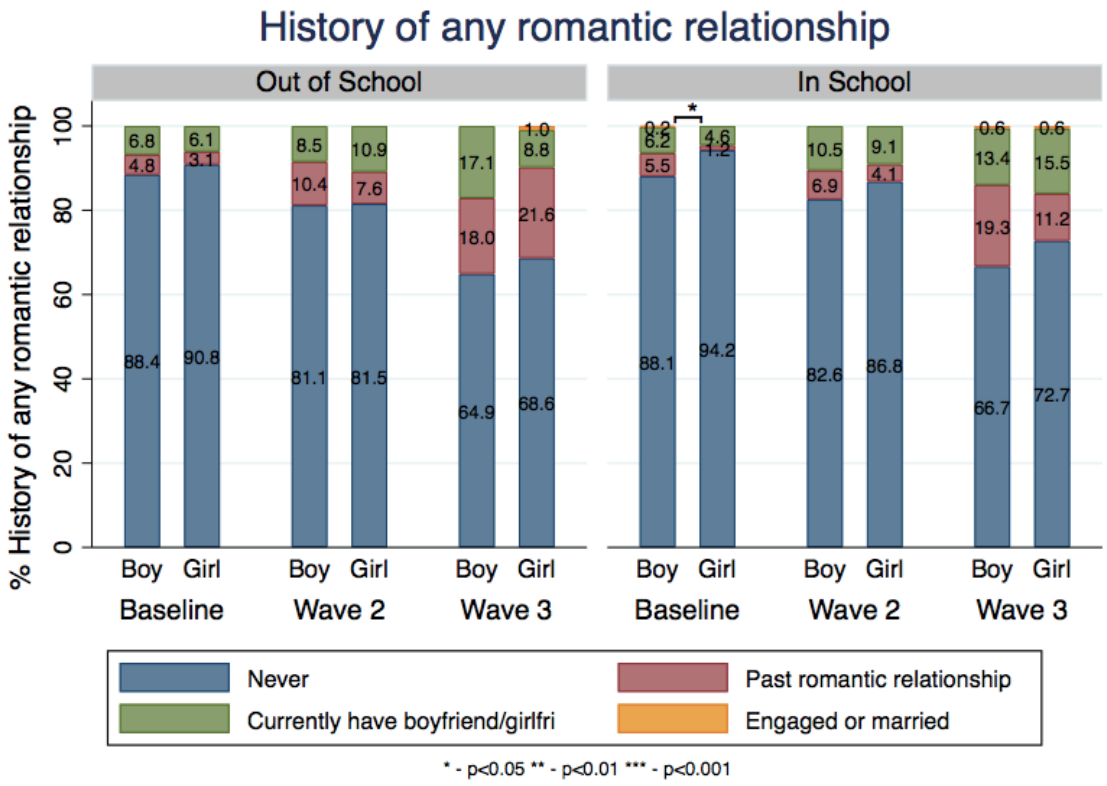
RELATIONSHIPS

This section focuses on adolescents' experience with romantic relationships, as well their peers' experiences. Approval of adolescent romantic relationships was assessed using a scale from 1 to 5, with 5 indicating the strongest approval. 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 sets of items were designed to quantify quality of relationship, including power imbalance and intimacy. The power imbalance scale encompassed 5 questions exploring partner influence on decisions of behavior of respondents while the intimacy scale encompasses questions about feelings and trust between partners. Mean scores for both scales ranged from 1 to 5. A higher score on the power imbalance scale suggests greater power of the partner in the relationship. A higher score on the intimacy scale suggests more intimacy in relationships.

Approval of adolescent romantic relationships was similar between boys and girls for both in-school and out-of-school, though approval appeared to increase from baseline to Wave 3.

In Wave 3, one third of adolescents reported having been in any relationship, with greater romantic involvement among in-school boys than in-school girls (33% versus 27%) (Figure 34). Romantic experiences increased significantly across the study period, with greater increases among out-of-school adolescents than in-school adolescents.

Figure 33



For those who had ever been in a romantic relationship, power imbalance and high levels of intimacy were commonly reported. In-school adolescents and out-of-school adolescents had similar levels of intimacy in Wave 3, though in-school girls experienced higher intimacy levels than in-school boys (4.47 vs 4.06). Power imbalance was common but experienced most by in-school girls (4.00) and least by out-of-school girls (3.55).

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 increased their perceived peer importance of having sex across the time period, but out-of-school adolescents differed by gender (boys decreased by 3% while girls increased by 7% between Wave 2 and Wave 3) (Figure 35). In Wave 3, one in five in-school boys indicated that they had close friends who had had sex versus 18% of out-of-school boys, 13% of in-school girls and 18% of out-of-school girls. Similarly to perceived importance, perceived prevalence of sexual behaviors also increased across the study period, with the exception of out-of-school boys who decreased by 5% between Wave 2 and Wave 3 (Figure 36). This contrasts with reports of personal sexual behavior, as a minority (ranging from 4% of out-of-school boys to 6% of out-of-school girls) of adolescents reported ever having sexual intercourse. In-school and out-of-school adolescents had similar rates of reporting sexual intercourse, though all groups saw an increase in sexual intercourse from Wave 2 to Wave 3 (Figure 37). This suggests that adolescents are over-emphasizing the importance of sexual intercourse due to false perceptions of importance among their peers.

Figure 34

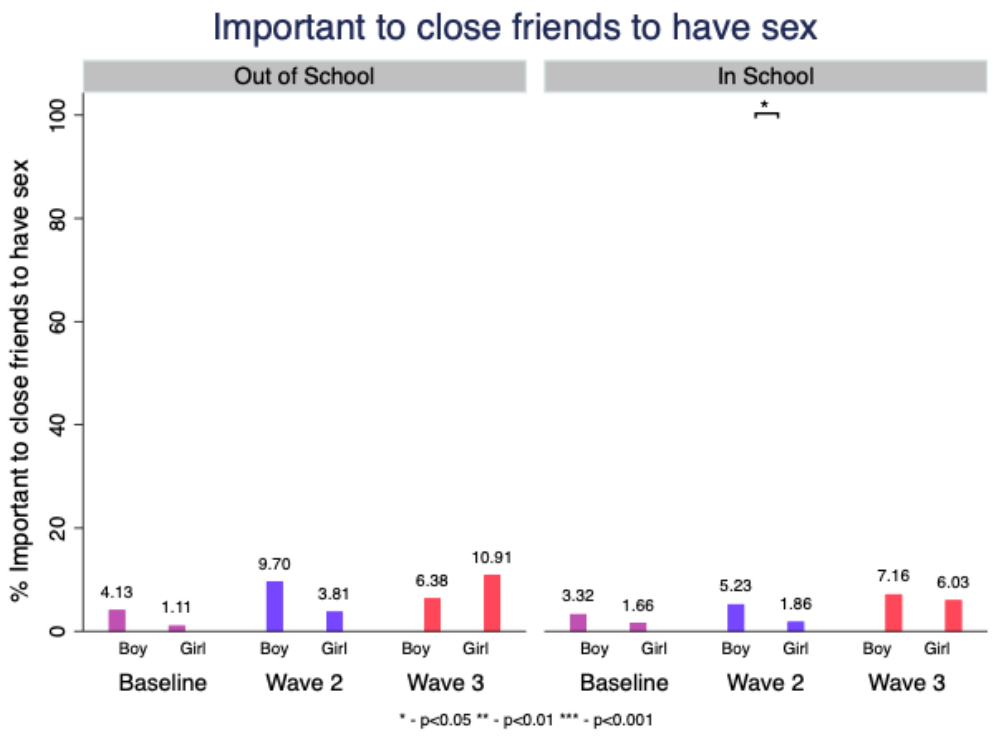


Figure 35

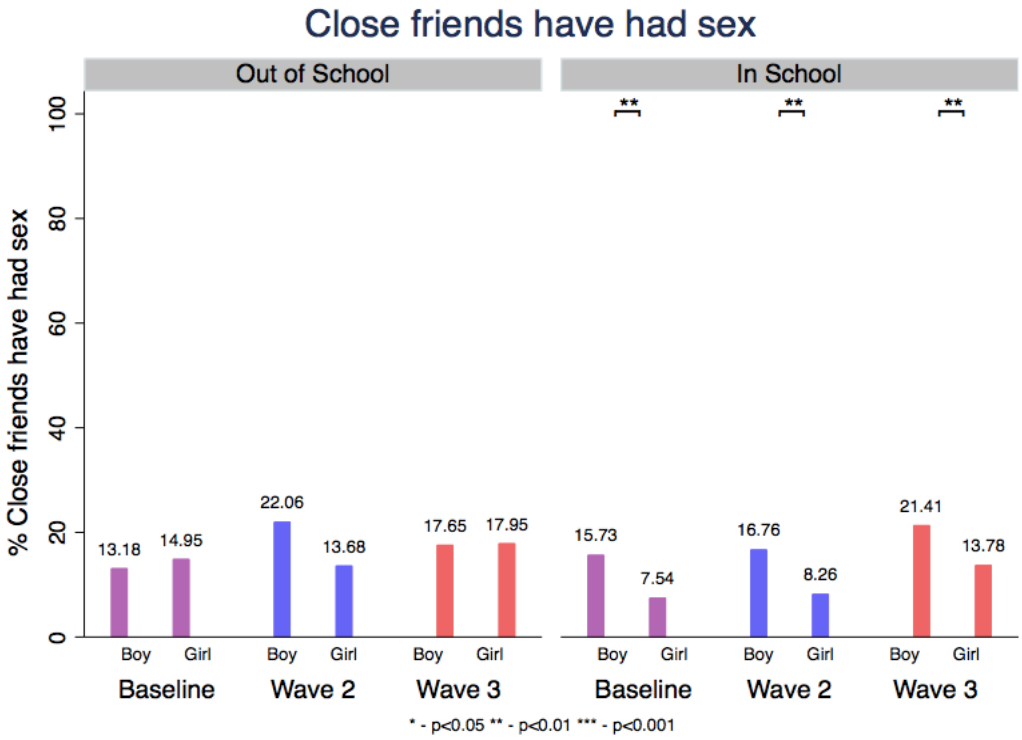
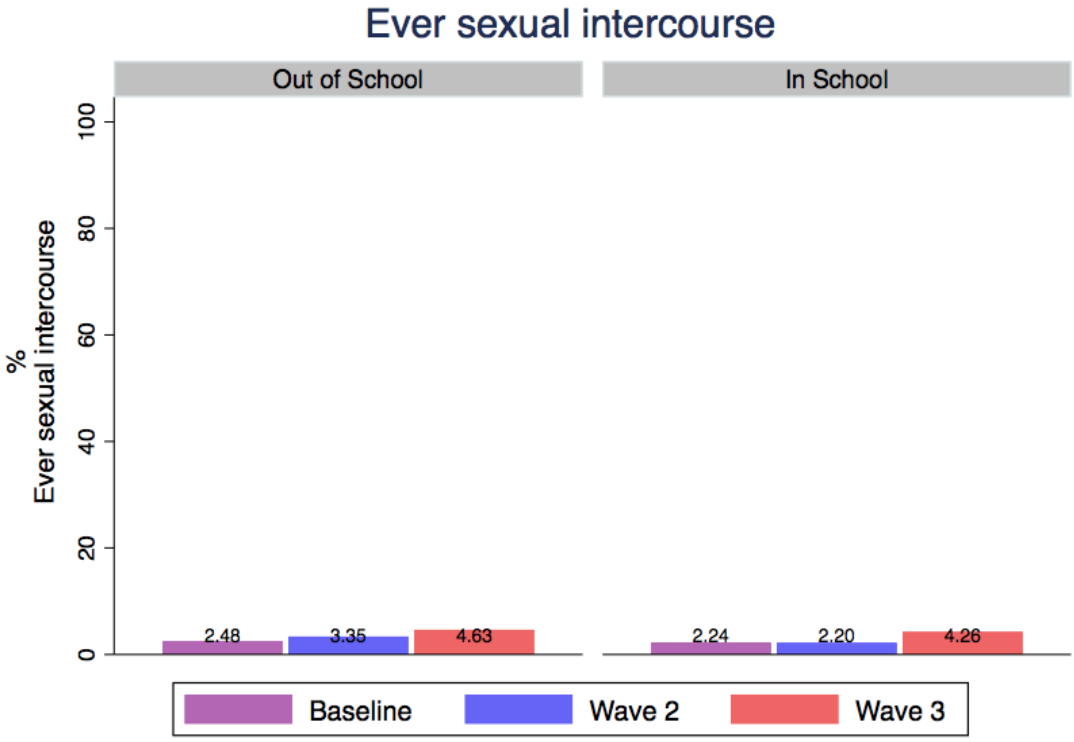


Figure 36



Half of adolescents (ranging from 44% to 57%) believed that it was the girl or woman's responsibility to prevent pregnancy, with significantly more in-school boys agreeing than in-school girls. This was also true for associating condoms with female promiscuity, as 76% of in-school boys agreed compared to 66% of in-school girls.

Over time, fewer adolescents subscribed to the idea that pregnancy prevention was women's sole responsibility (-3% among in-school and -6% among out-of-school). However, a substantial increase in stigma related to girls carrying condoms was noted between baseline and Wave 2 and remained stable at about 71% for both in-school and out-of-school between Wave 2 and Wave 3.

SECTION 2: GEAS WAVE 3 IMPACT EVALUATION RESULTS (CONTROL VS INTERVENTION)

This chapter describes baseline differences (captured at baseline) between intervention and control, which reflect selectivity into GUG! intervention as adolescents opted to participate. We then discuss differences between the two groups at Wave 3 while accounting for baseline differences. This "difference in difference" approach specifically focuses on how the two groups have evolved over the course of 18-month follow-up and how these changes compare between the two groups. Results presented in the main body of the text are based on intention to treat (ITT) analysis (comparison of intervention and control regardless of GUG! exposure). A per protocol analysis (comparison exposed intervention to non-exposed controls) was also conducted given that a significant proportion of adolescents in the control group were exposed to GUG! and a significant proportion of adolescents in the intervention had limited exposure to GUG! Findings from the per protocol analyses can be found in Appendix D, though there were no major differences in findings between the ITT and per protocol analyses.

GROWING UP GREAT EXPOSURE

The GUG! intervention was designed to engage VYAs in weekly club sessions over the course of the nine months of the school year (for in-school VYAs). Out-of-school VYAs joined club sessions for an additional two months. Overall, after accounting for regular holiday breaks and exam periods, VYA school clubs met for approximately 26 weekly sessions while community-based clubs (for out-of-school VYAs) met for an average of 28 weekly sessions. There was no standard format for weekly meetings. Club facilitators could use any materials from the VYA toolkit that they desired, in any order or frequency, though they were encouraged to use all materials in full at least once by the end of the intervention period. The VYA toolkit included three materials for group use – storybooks (one each for boys and girls), activity cards and the interactive game. Puberty books for girls and boys were distributed to each participating VYA as take-home materials, though they could also be used as references or to inspire discussion during weekly sessions.

The 9-month GUG! intervention took place between baseline and Wave 2 of the GEAS. However, adolescents continued to report exposure to GUG activities in the second year (in the six months prior to Wave 3). Thus, forty percent of adolescents in the intervention group indicated participating in at least one of the three activities (VYA club, classroom session, or community session) in the six months prior to Wave 3. Twenty-two percent reported attending a VYA club meeting, 20% a classroom session, and 10% had met with a provider. Of the adolescents who had attended VYA club sessions, about 67% had attended one to five sessions, 18% had attended six to ten sessions, and the remainder attended 11 to 15 sessions. Attendance was slightly higher for classroom sessions, with 64% attending one to 5 sessions and 24% attending six to 10 sessions. A majority of boys and girls reported using the puberty book (64% and 53%, respectively). About half had used the activity cards, and a little less than half (45%) of boys and girls used the storybook. In addition, 3% of VYAs reported attending a community session targeting parents, caregivers and other adults, though these activities were not intended for VYAs. In addition, 16% of adolescents reported that their parents/caregivers had attended these community sessions in the six months preceding Wave 3 data collection.

Unexpectedly high exposure rates among VYAs in the intervention group may be due to integration of the approach into DRC's national Family Life Education (FLE) program. Part of the GUG! intervention

purposefully linked intervention materials to the FLE curriculum, and teachers were trained to use materials during classroom sessions. It is likely that teachers continued to use GUG! materials in schools after the intervention ended. Reported participation in VYA clubs is more difficult to interpret. It is possible, though unlikely, that some schools continued to support GUG! clubs with their own resources after the intervention ended. It is also possible that VYA respondents had been exposed to club activities via Bien Grandir Plus!, a sister project implementing an adapted GUG! model in other areas of Kinshasa. More likely, however, is that respondents mistook other group activities for GUG! club activities. Reported rates of parent participation are likely due to parent engagement in Bien Grandir Plus! activities, which targeted communities that may overlap with GUG! communities.

As with Wave 2, there was significant contamination in the control group at Wave 3. About 24% of VYAs in the control group were exposed to GUG! activities in the six months preceding Wave 3, most of whom (80%) were in school.

The continued exposure to GUG! activities even after the intervention was officially over may reflect the integration of GUG! materials and activities in the school curriculum, either as a continuation of previous activities or as a scale up process as the GUG! intervention was expanded to other communes in Kinshasa.

COMPARISON BETWEEN INTERVENTION AND CONTROL AT BASELINE AND FOLLOW-UP AT WAVE 3

The following sections are observational differences between intervention and control groups that are presented to set the context of the following intervention evaluation. They are presented as background demographic characteristics to inform interpretation of the following section on the Difference in Differences analyses. Thus, data presented in this section will not include significance estimates.

LIFE HISTORY AND LIFE CIRCUMSTANCES

Baseline differences

The mean age of in-school and out-of-school adolescents were comparable between boys and girl (in-school: 11.95 versus 11.84; out-of-school: 11.91 versus 11.92). Tribal affiliation differed between in-school intervention and controls with greater Kwilu- Kwango representation and a lower proportion of Bakongo in the intervention group. As compared to the controls, a higher proportion of girls in the intervention had caregivers who had migrated to Kinshasa, while no differences between the control and intervention groups were reported for boys.

Adolescents' life circumstances at baseline also differed between the intervention and control groups, particularly with respect to economic circumstances. In-school adolescents in the intervention arm were wealthier than in-school controls, while the reverse was true among out-of-school boys. Family structure at baseline was similar among intervention and controls, with the exception of out-of-school girls, who were less likely to live with both of their parents.

At baseline, a significant proportion of boys and girls reported experiencing adverse childhood events (72% of in-school and 76% out-of-school boys and 66% of in-school and 79% of out-of-school girls, but no differences were reported between intervention and controls.

Change over time

As the measures of life history and life circumstances were retrospective at baseline, these questions were not asked in Wave 2 or 3.

EDUCATION

Baseline differences

At baseline, educational attainment was similar among out-of-school adolescents in the intervention and control groups. However, in-school adolescent boys and girls participating in the intervention were more likely to be at age-appropriate grade compared to the control groups. As a result, they had a higher literacy level than the controls, especially for girls. Conversely, a greater proportion of out-of-school boys in the intervention group (13.74%) had never been to school relative to controls (2.70%), and out-of-school boys and girls alike in the intervention group were more likely to have left school for lack of school fees relative to controls.

Change over time

At Wave 3, age-for-grade educational attainment was similar between intervention and control for all boys whereas in-school girls in the intervention arm had higher education attainment than in-school girls in the control group (88% vs. 81%, p=0.006). Literacy rate increased over the study period in all study groups with some gaps between the intervention and control groups persisting at Wave 3. Specifically, the literacy rate was higher among in-school girls in the intervention group compared to the controls (91% vs 86%, p=0.022) while the reverse was true among out-of-school girls (55.81% in the intervention group vs. 63.85% among controls, p=0.187). At Wave 3, literacy rates were similar between intervention and controls for boys. School aspirations increased among in-school girls, with no difference between interventions and controls. By Wave 3, nine in ten adolescents, boys and girls alike indicated they hoped to pursue college or doctorate level education with no difference by study group.

SOCIAL RELATIONSHIPS

With caregiver

Baseline differences

While generally adolescents in the intervention and control groups had similar family structures, out-of-school girls in the intervention group were less likely to live with both of their parents than in the control group (intervention vs. control: 41.54% vs. 65.33%, p=0.039). Family relations at baseline, in the form of connectedness (feeling close to caregivers and comfortable communicating concerns regarding puberty and romantic relationship) and monitoring (caregivers being aware of adolescents' location, academic performance and friends' names) were also similar between study groups.

Change over time

Little change in caregiver closeness was observed over time in either intervention or control groups over the study period (baseline – Wave 3). Caregiver monitoring increased across all in-school groups, with no differences between intervention and control (in-school boys: OR: 0.94, 95% CI (0.63-1.39); in-school girls: OR: 0.77, 95% CI (0.53-1.13)), whereas a decrease in the intervention group relative to the controls was observed for out-of-school boys (OR: 0.52, 95% CI (0.29-0.93)).

With peers

Baseline differences

At baseline, adolescents in the intervention group reported similar peer structures as controls, but boys in the intervention group were less likely to spend time with friends than in the control group for both in-school and out-of-school adolescents: 60.80% in the in-school control group saw their friends on a daily basis vs. 48.32% in the in-school intervention group. Among out-of-school adolescent boys, 77.37% in the control group saw their friends on a daily basis vs. 60.24% in the intervention group. The same was not true for girls. Girls were less likely to socialize in mixed-sex peer groups than boys, but the difference was consistent across intervention and control groups. Only 39.64% of in-school girls and 28.02% of out-of-school girls had friends that were boys versus 45.22% of in-school boys and 36.78% of out-of-school boys who had friends that were girls.

Adolescents in the in-school intervention group were more likely to believe studying hard was important to their friends than in the control group. In addition, in-school girls in the intervention group were more likely to believe their friends had had sexual intercourse compared to in-school control girls.

Change over time

Few changes in peer structure (e.g., number of male or female friends) were observed in Wave 3. Nearly half of both in-school and out-of-school adolescents reported having 1-3 friends with no differences between intervention and controls. The gender divide in peer sex composition was no longer apparent in Wave 3 as a lower proportion of boys reported opposite sex friends, compared to baseline. Thus, boys and girls in the intervention and control groups, were as likely to interact in mixed-sex peer groups (43.22% vs. 40.83% for in-school boys: and 34.46% vs. 36.46% for out-of-school boys; 40.10% vs. 42.76% for in-school girls and 28.68% vs. 27.34% for out-of-school girls).

In Wave 3, approximately half of adolescents reported spending time with peers on a daily basis (in-school vs. out-of-school: 43.09% vs. 54.17%), with no difference by study arms. out-of-school boys were more likely to spend time with friends on a daily basis than their in-school counterparts (56.63% and 64.96% among out-of-school intervention and control boys: p=0.221 versus 49.44% and 51.47% among in-school intervention and control boys: p=0.738). The same trend was also observed for girls (44.86% and 50.00% among out-of-school intervention and control girls: p=0.439 versus 35.43% and 38.08% among in-school intervention and control girls: p=0.726).

Consistent with baseline, two thirds to three quarters of adolescents believed that their friends considered regular school attendance to be important (in-school vs. out-of-school: 87.84% vs. 79.19%). Between baseline and Wave 3, in-school and out-of-school adolescents were more likely to believe their peers thought school attendance was important (in-school: intervention vs. control: +6.62% vs. +13.57%, p=0.093; out-of-school: +25.00% vs. +16.17%, p=0.085).

DIFFERENCE IN DIFFERENCES APPROACH

This section presents results from the difference in difference (DiD) intervention evaluation. Any results using this approach will present significance indicators. Note that all graphs with blue/green coloring between baseline and Wave 3 represents a DiD analysis, with significance signified by darker shading. The graphs with three time points and the graphs that compare Waves 2 and 3 are observational differences between intervention and control but are not DiD.

PERCEPTIONS OF GENDER NORMS

Baseline differences

At baseline, in-school and out-of-school boys in the control group were more likely to perceive adolescent romantic relationships as normative (p=0.006 and p=0.048, respectively) and in-school control boys were also more likely to endorse unequal gender stereotypical traits and to be accepting of teasing gender atypical adolescents than in-school boys in the intervention group. In-school girls in the control group were also more likely to be accepting of teasing gender atypical boys (p=0.031), while no other gender normative views were observed by the study group, including attitudes towards sharing household chores.

Change over time

Specific gender normative views about sharing household chores addressed in the GUG! intervention shifted following the intervention. Specifically, we found a 10 and 14 percentage point rise between baseline and Wave 3 in the percentage of adolescents endorsing equal views about household responsibilities among in-school and out-of-school adolescents in the intervention groups respectively, while these percentages decreased in the control groups. Of note, attitudinal changes in the intervention group were greatest between baseline and Wave 2, and were sustained in Wave 3, although to a lesser extent (Figure 38).

Results from the difference-in-difference analysis indicate that the odds of endorsing more gender equal attitudes towards household responsibilities in Wave 3 were 1.88 times and 2.56 times higher among in-school and out-of-school intervention participants relative to the control groups, with respect to their baseline attitudes.

These attitudinal shifts, however, did not translate into behavioral change as we found no difference in household sharing trends between brothers and sisters between the intervention and control groups (Figure 39).

Figure 37

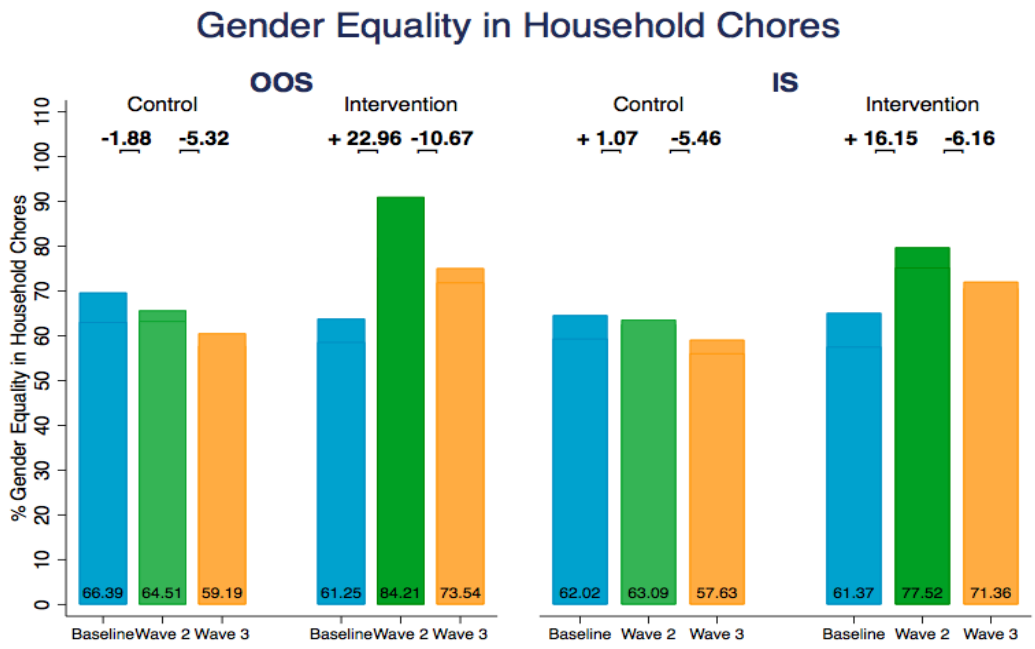
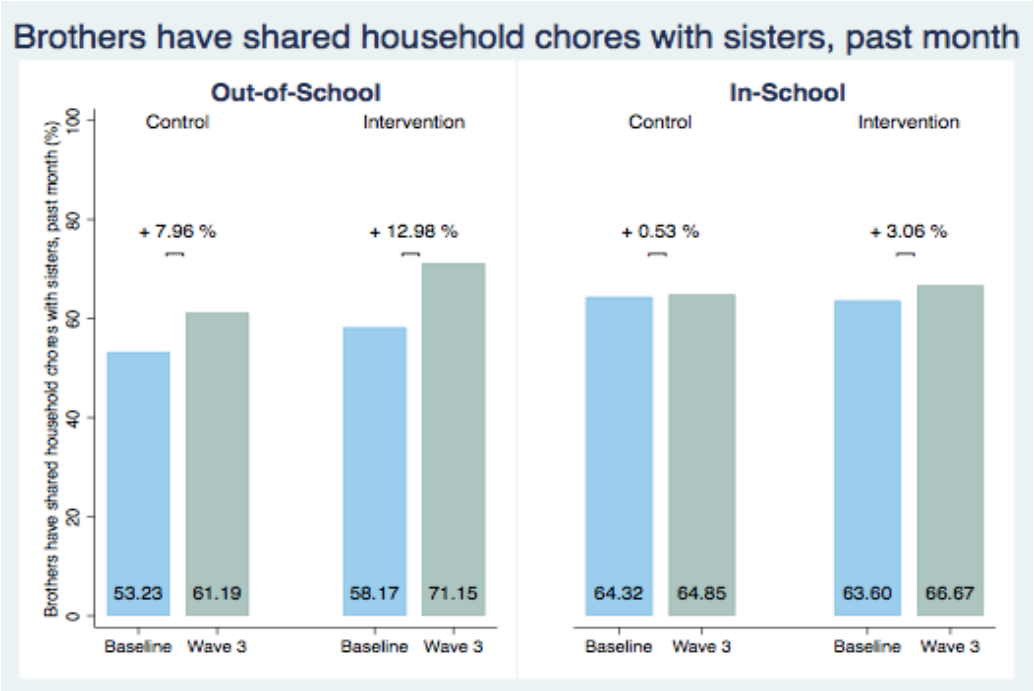


Figure 38



Another GUG! intervention area was to address discrimination against gender atypical behavior. Such attitudes were prevalent at baseline and increased between baseline and Wave 3 among out-of-school adolescents while they decreased among in-school controls. There was however no differential trend between intervention and control groups (Figures 40 and 41).

Figure 39

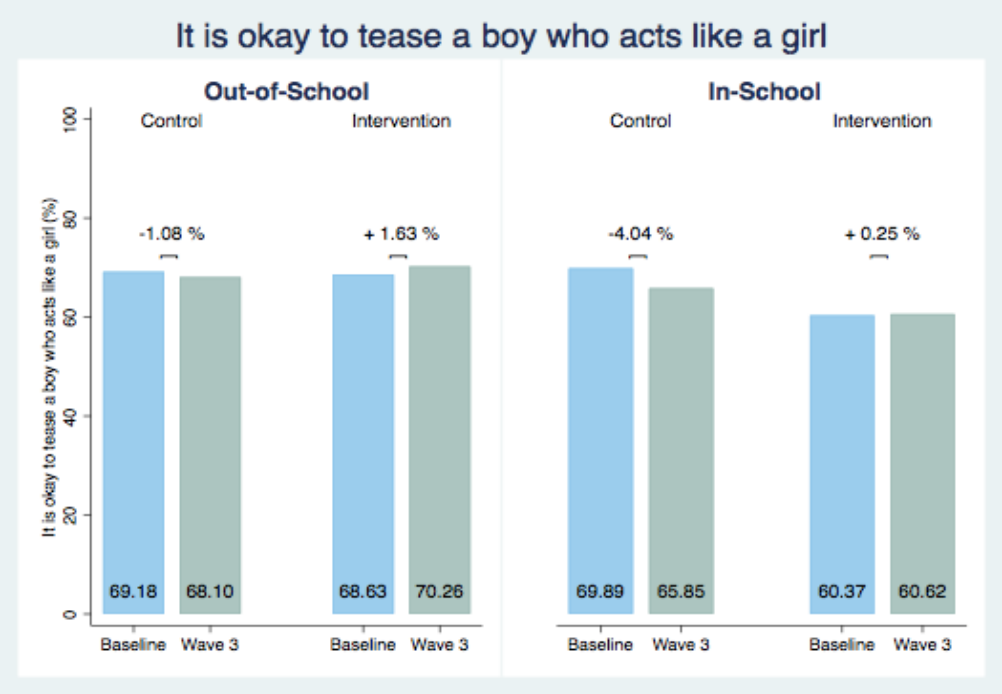
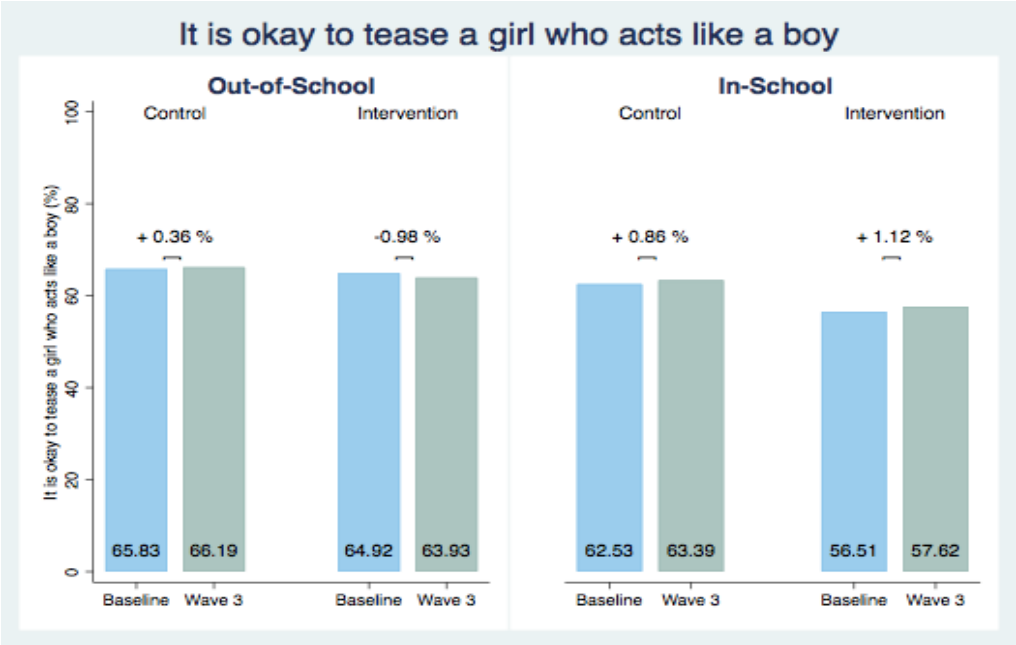


Figure 40



Other gender normative domains, including stereotypical traits, roles or relationships that were not directly addressed by the GUG! interventions were not significantly shifted in the intervention group relative to the controls. Over time, stereotypical gender roles and traits remained high across study groups, though stereotypical role scores dropped slightly between baseline and Wave 3 among out-of-school adolescents, with no differences between intervention and controls (Figures 42 and 43). We also found slight increases in young people's perceptions of a sexual double standard between baseline and Wave 3 across study groups (Figure 44). Finally, approval of romantic relationships during adolescence, as measured by endorsement of attitudes toward having a boyfriend or girlfriend, increased as young people grew older between baseline and Wave 3, with no difference between interventions and controls.

Figure 41

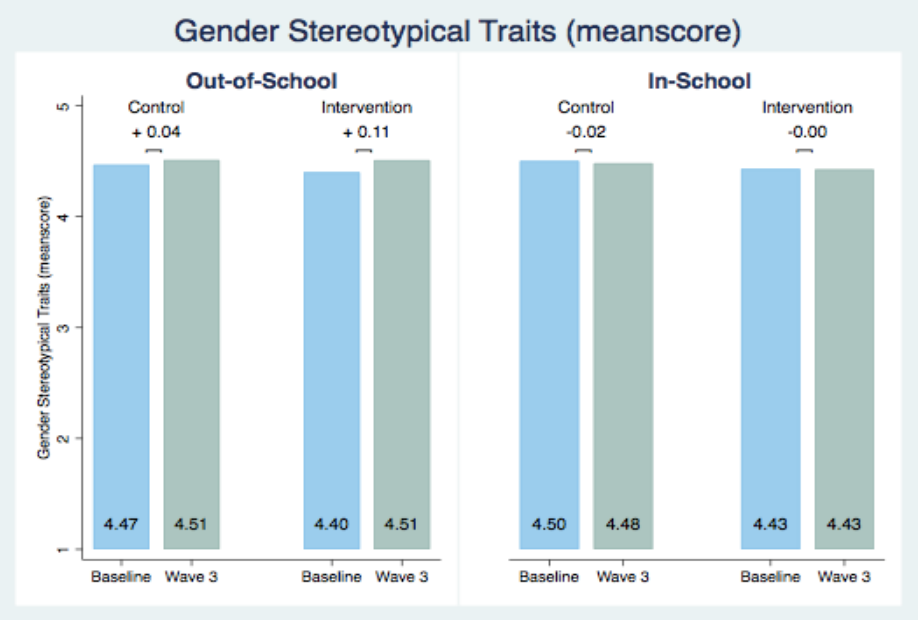


Figure 42

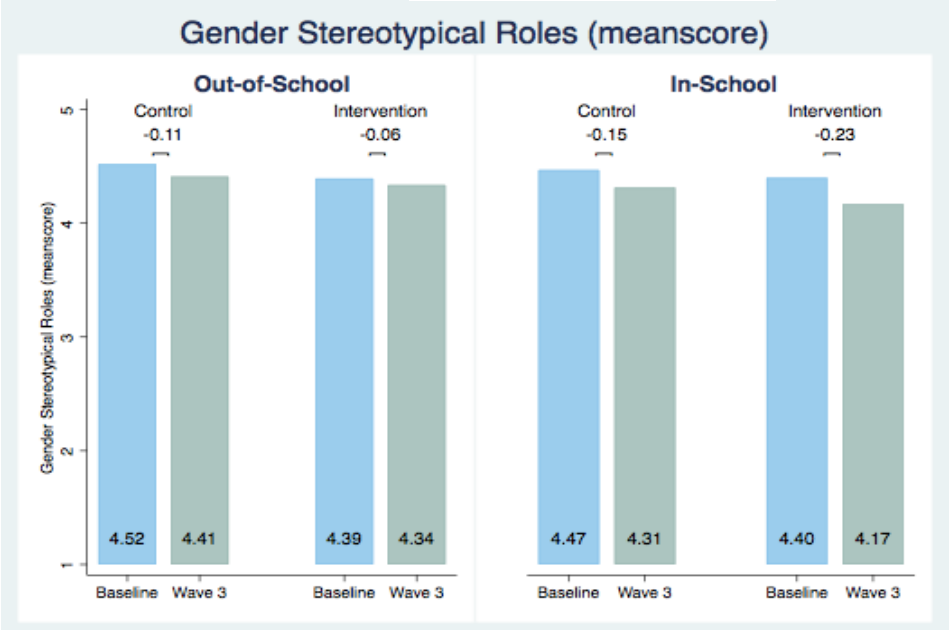
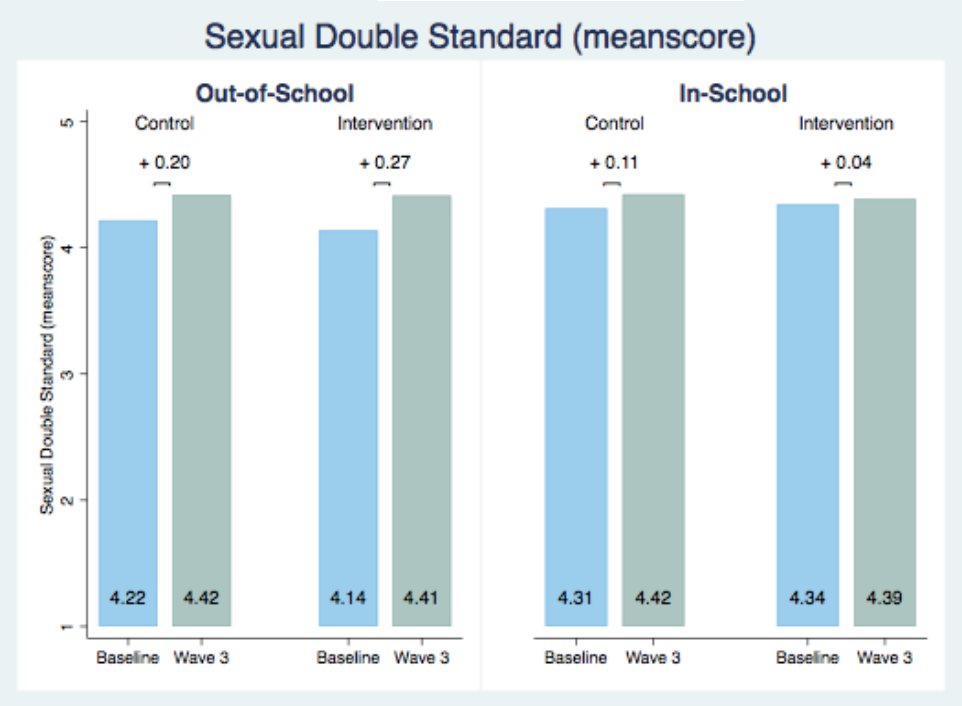


Figure 43



AGENCY

Baseline differences

While agency and women and girl's empowerment were not direct outcomes of the GUG! intervention, these constructs are viewed as critical dimensions of gender equality, and to improving women's and girls' health and wellbeing. VYAs agency was operationalized using three indicators that are salient to the lives of young adolescents across diverse cultural settings (Zimmerman, 2019): freedom of movement, voice (or the ability to be heard) and decision making (or the ability to make daily decisions). At baseline, in-school girls in the intervention group reported having more voice ($p<0.001$) and decision-making power ($p-=0.002$) than the control groups. No differences were seen in out-of-school girls, in-school or out-of-school boys.

Change over time

Comparing Wave 3 to baseline, freedom of movement, voice and decision making increased among all study groups with no additional improvement in the intervention relative to the controls (Figures 45, 46, and 47).

Figure 44

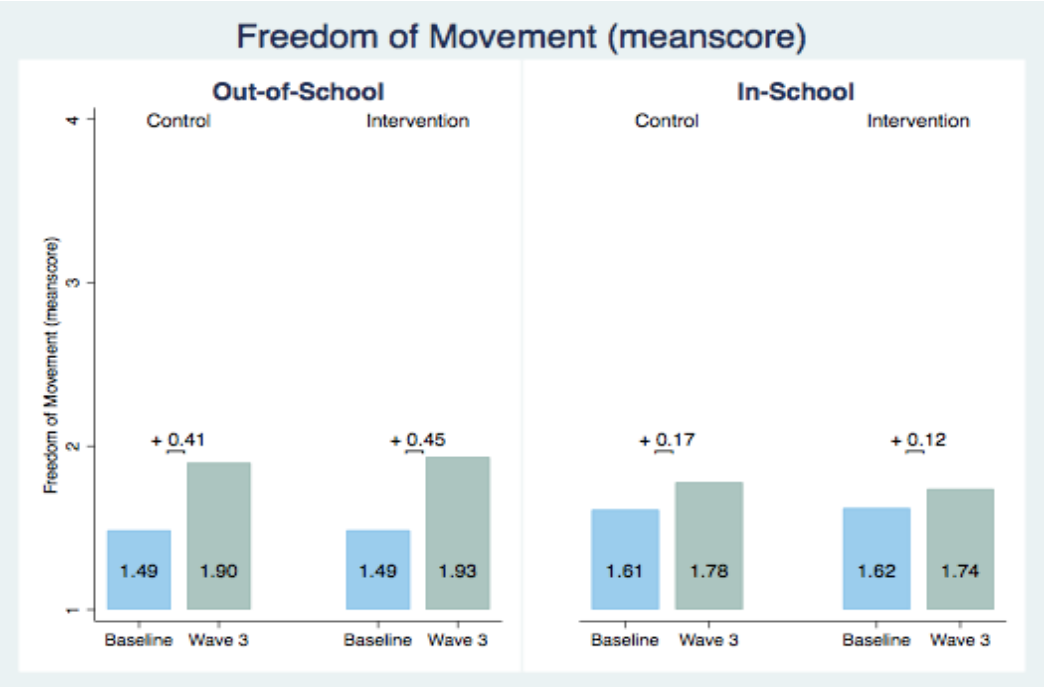


Figure 45

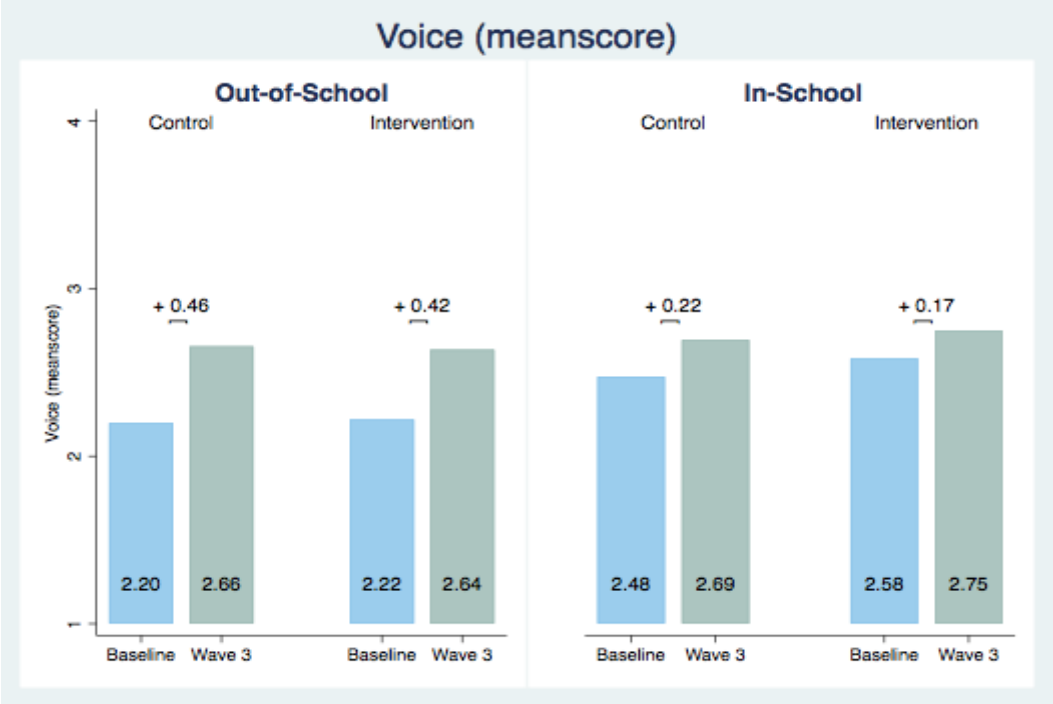
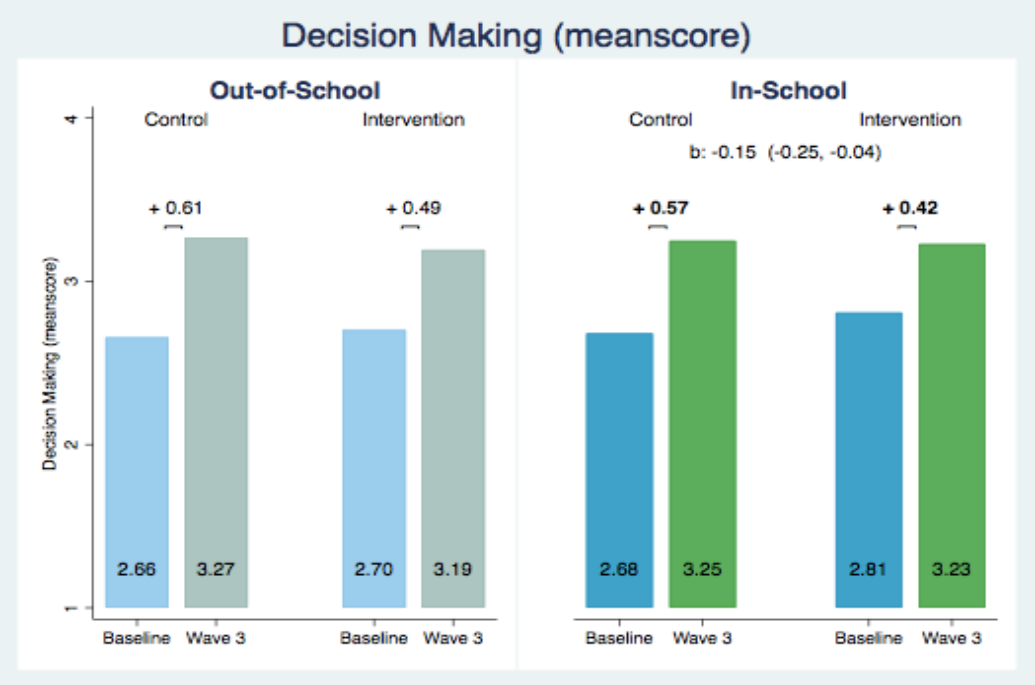


Figure 46



ATTITUDES AND EXPERIENCES RELATED TO PUBERTAL DEVELOPMENT AND BODY COMFORT

Baseline differences

Another critical component of the GUG! intervention was to promote communication, knowledge and comfort with pubertal development, especially for girls. At baseline, body satisfaction was moderate (based on an indicator assuming a positive outlook across 5 items) with significant inequalities between out-of-school and in-school adolescents. No differences were noted between intervention and controls.

At baseline, few adolescent girls had gone through menarche, and among those who ever had a period, about half knew when to expect their next period and many felt ashamed of their bodies during their periods, especially the out-of-school girls. Knowledge about the timing of menstruation was slightly higher among in-school girls in the intervention group relative to the control, while stigma was higher among out-of-school girls in the control group compared to the intervention group (p=0.044).

Change over time

The intervention did not have a significant effect on body satisfaction for boys and girls alike nor on menstrual attitudes and management. Differential trends in body satisfaction between out-of-school boys and girls were noted both in the intervention and controls (Figures 48 and 49).

Figure 47

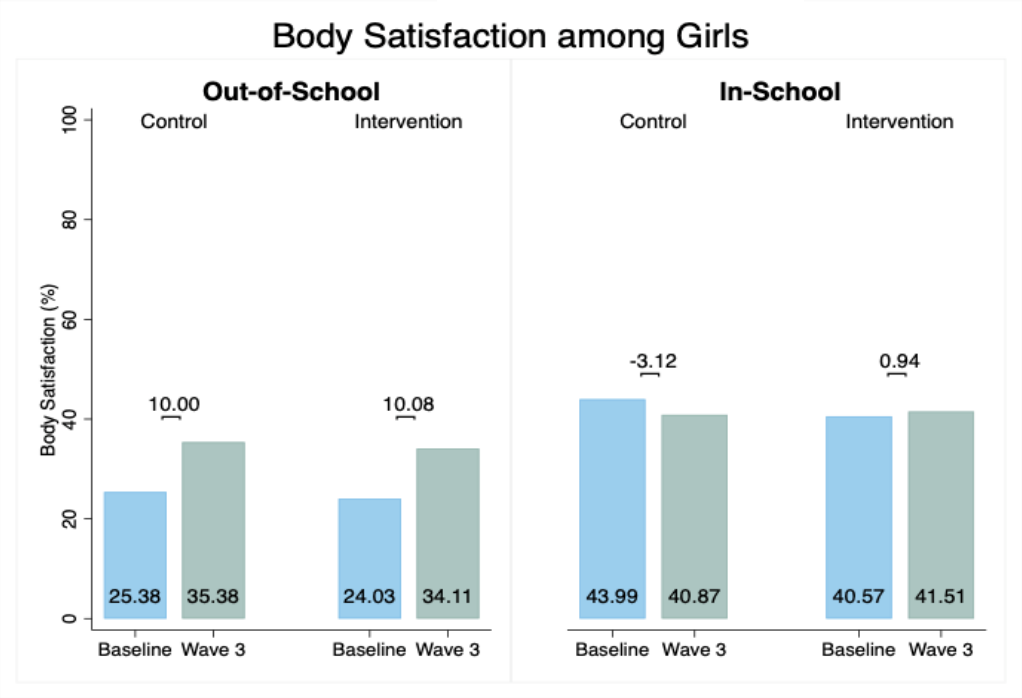
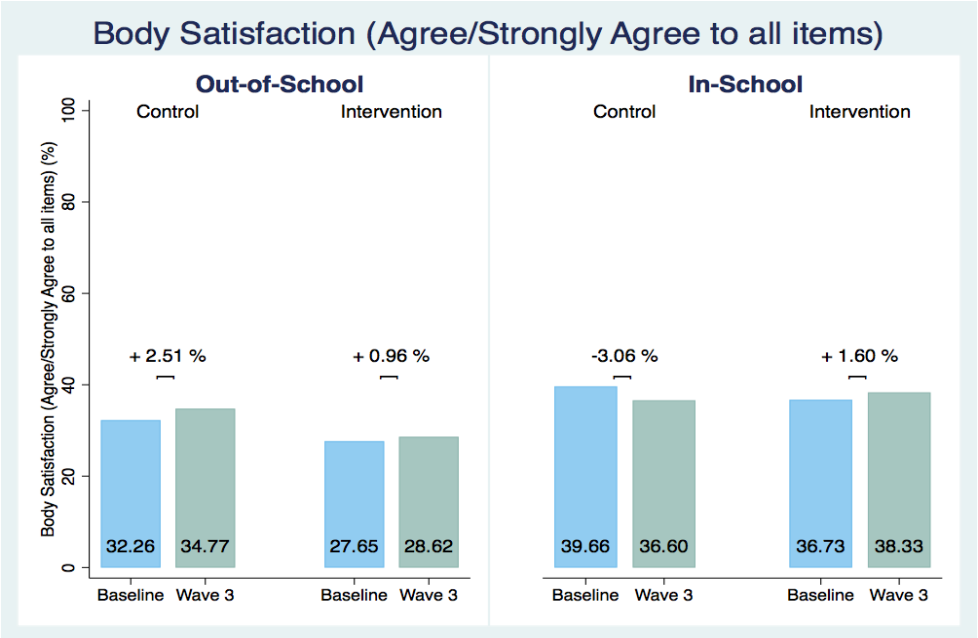


Figure 48



Stigma related to menstruation substantially decreased over time, especially among out-of-school adolescents but the magnitude of the decline was similar between intervention and controls (Figure 50). In addition, young girls were more likely to track their period over time and while the interaction was not statistically significant, trends were qualitatively different between intervention and control groups for out-of-school girls, with out-of-school girls in the intervention group more likely to track their periods over time while the reverse was true among the controls (Figure 51).

Figure 50

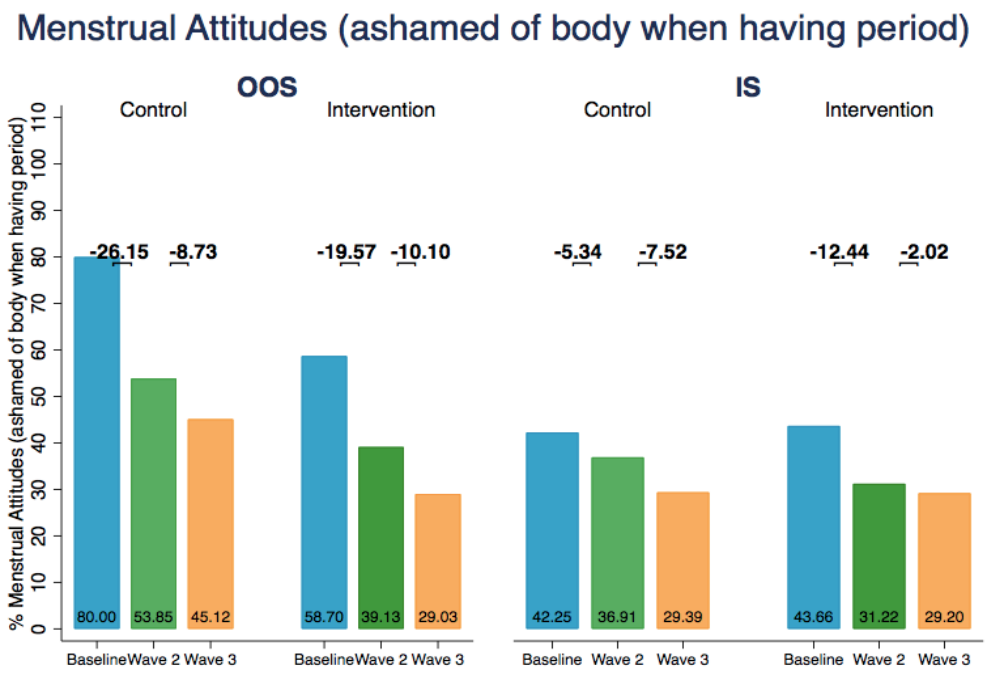
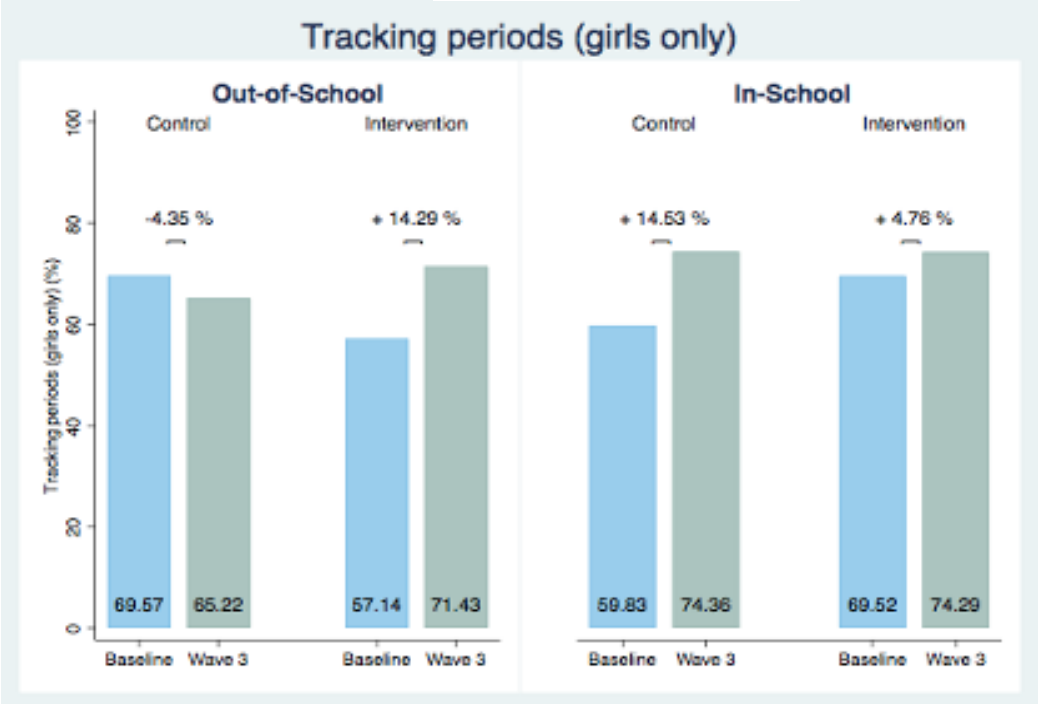


Figure 51



SEXUAL HEALTH

SEXUAL & REPRODUCTIVE HEALTH ATTITUDES

The GEAS study included several questions exploring adolescents' sexual and contraceptive attitudes. While a number of those indicators were included at baseline, other topics were introduced among older adolescents (15 years and older) in Waves 2 and 3. In this section, we start by presenting baseline differences and trends by study group for indicators with available baseline information. We complement this data with a study group comparison of SRH attitudinal indicators for which no baseline data is available. In this complementary analysis, a DiD analysis was not possible in the absence of pre-intervention data. However, the comparison remains interesting, as the GUG! intervention promoted SRH communication and interactions with health facilities which could dispel SRH misperceptions and reduce stigma.

Baseline differences

At baseline, most boys and girls felt embarrassed to get condoms with no differences between interventions and controls. A substantial percentage of girls also felt embarrassed to seek contraception if they needed it.

Changes over time

In Wave 3, embarrassment to get a condom slightly decreased among out-of-school intervention adolescents but increased in all in-school groups, especially among the controls. The differential trends between intervention and controls were not statistically significant. Embarrassment about getting contraception significantly fell among adolescents in the in-school and out-of-school intervention groups between baseline and Wave 2 but the drop was only sustained in Wave 3 among out-of-school adolescents. As a result, there was no difference in trends between intervention and control in-school adolescents (OR: 1.32, 95% CI: 0.85-2.03) between baseline and Wave 3. On the other hand, interventions and controls had opposite trends among out-of-school adolescents, with a significant drop in embarrassment in the intervention group versus an increase among out-of-school controls. Ultimately, the intervention led to a significant drop in embarrassment about contraception access among out-of-school adolescents (OR: 0.39, 95% CI: 0.17-0.89). These results are shown in Figures 52 and 53, though they do not present the DiD results and thus do not report significance.

Figure 52

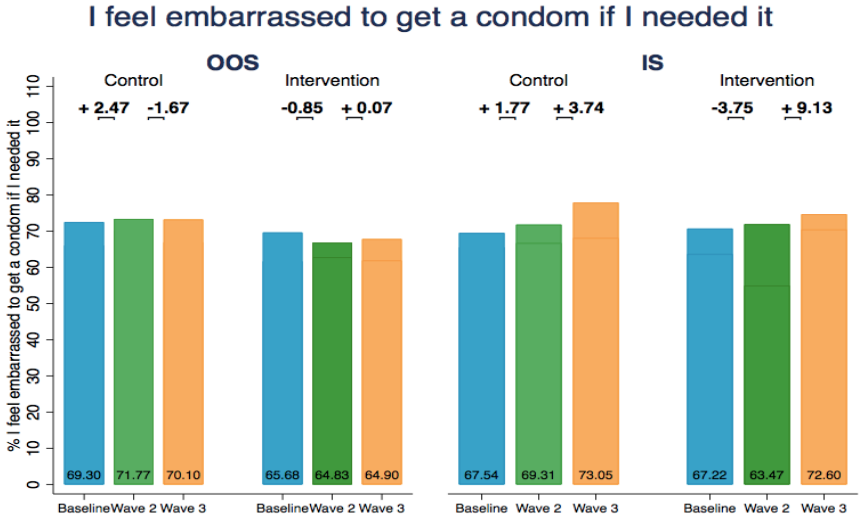
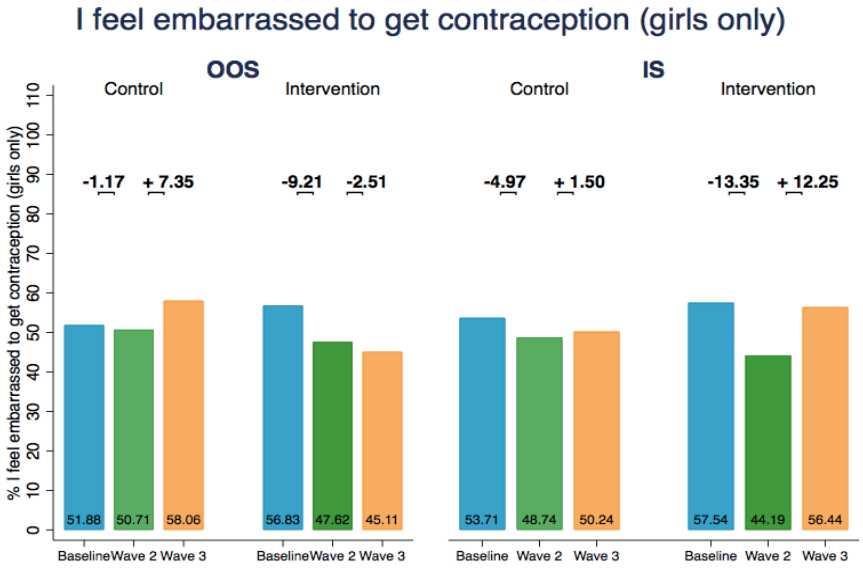


Figure 53



Attitudes valuing male sexual prowess and shaming of female sexuality were prevalent among boys and girls in both interventions and controls and tended to increase over time, with the exception of attitudes viewing girls as solely responsible for preventing a pregnancy. Figures 54 and 55 show preliminary impressions of changes in attitudes over the time period, though again are not DiD analyses so significance is not presented.

Figure 54

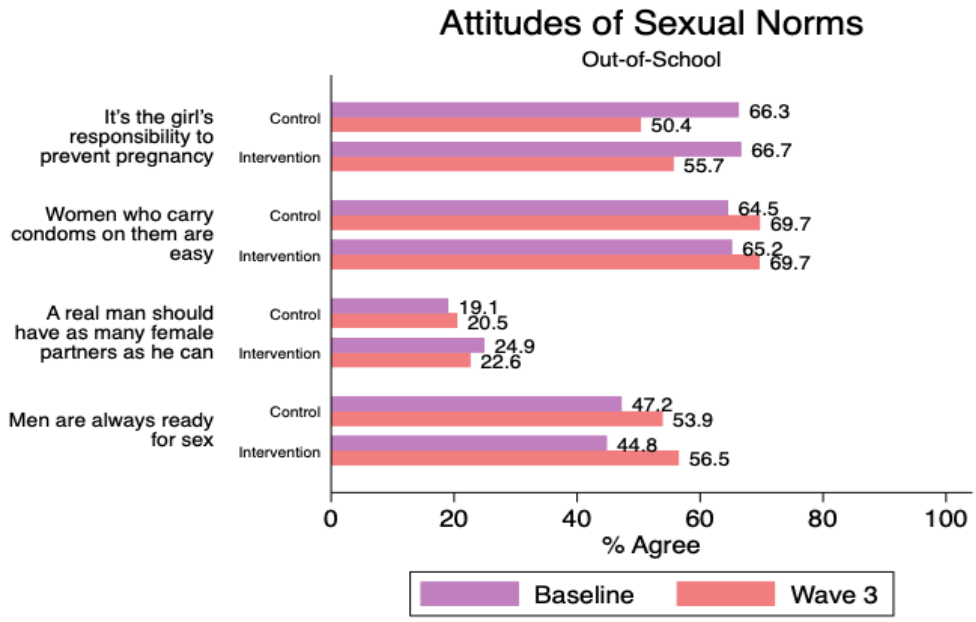
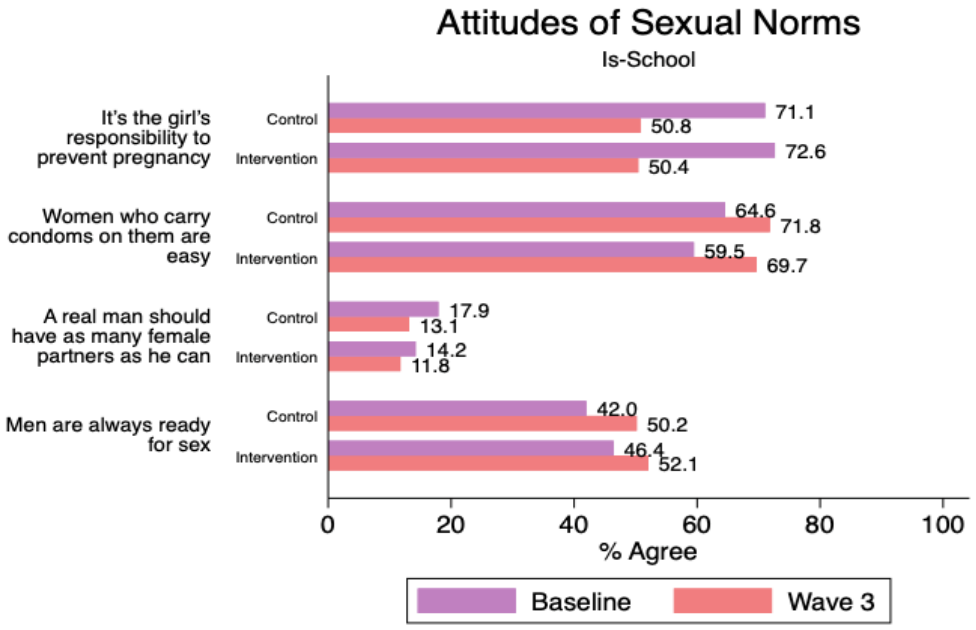


Figure 55



Misperceptions and stigma related to contraception were also widespread and remained stable or increased over time in both the intervention and the control groups (Figures 56 and 57).

Figure 56

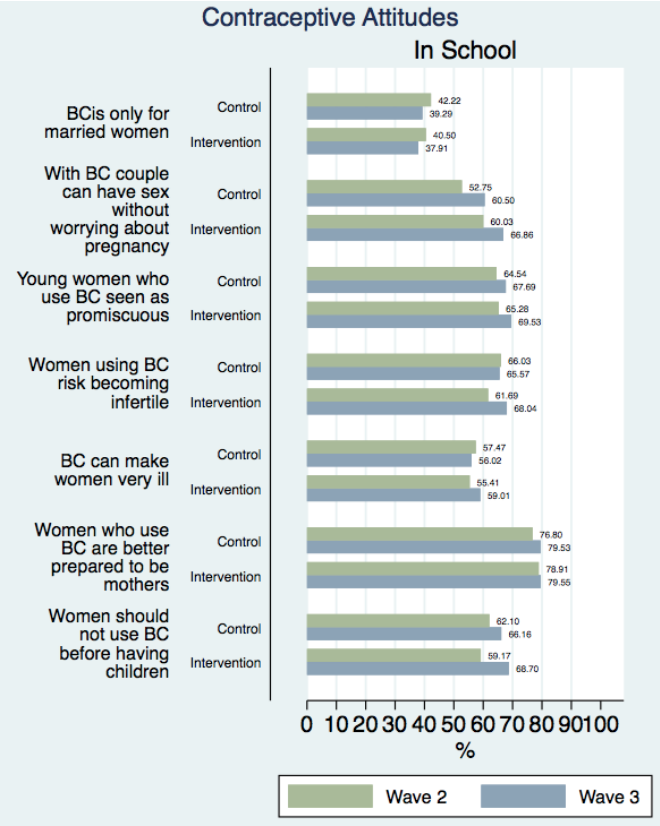
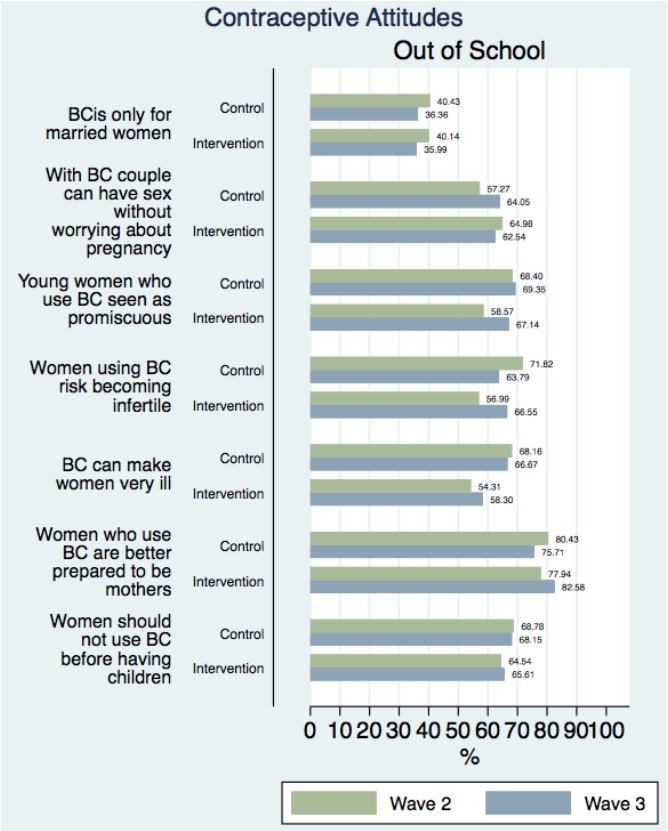


Figure 57



SEXUAL & REPRODUCTIVE HEALTH COMMUNICATION

Baseline differences

At baseline, communication about SRH topics was rare, with the exception of pubertal changes. Significant differences were noted between interventions and controls: in-school girls and boys in the intervention group were more likely to have talked about pregnancy. In-school intervention boys were also more likely to have talked about contraception, and sexual relations while out-of-school intervention girls were also more likely have talked about body changes.

Changes over time

Over time, communication about SRH topics, including sexual relationships, body changes, contraception or pregnancy increased for both intervention and control groups (Figures 58, 59, 60, and 61). The greatest increase in communication over the three time points related to body changes across all study groups, irrespective of intervention or controls. A greater increase in communication about pregnancy, contraception and sexual relation was noted in Wave 2 among out-of-school adolescents in the intervention group relative to the controls. This effect was reduced in Wave 3, with the exception of communication about contraception, which remained higher in the intervention group relative to the controls among the youngest out-of-school adolescents (Figure 62).

Figure 58

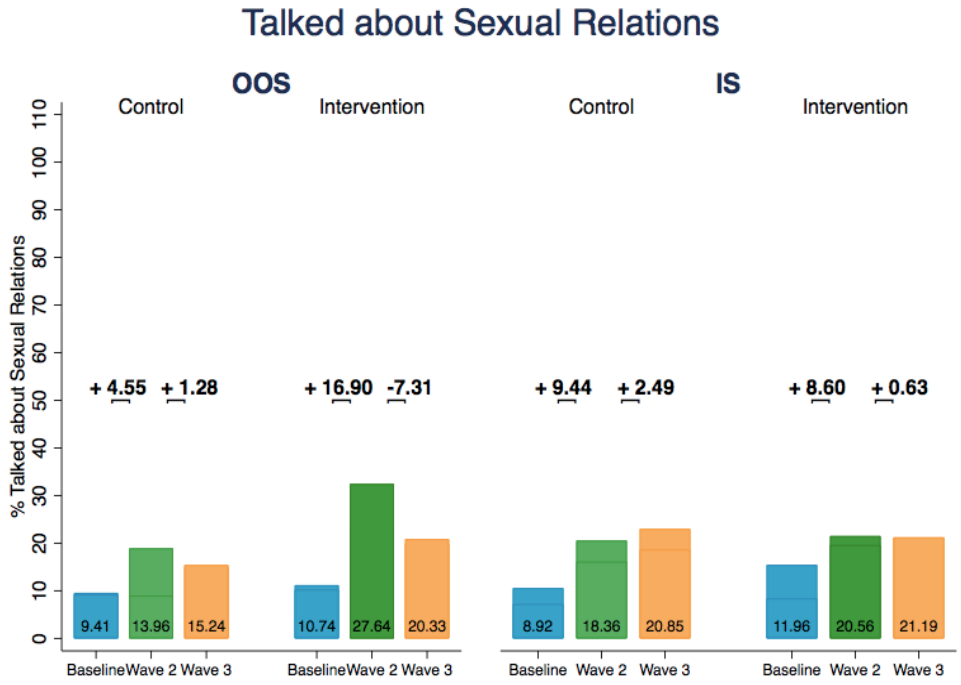


Figure 59

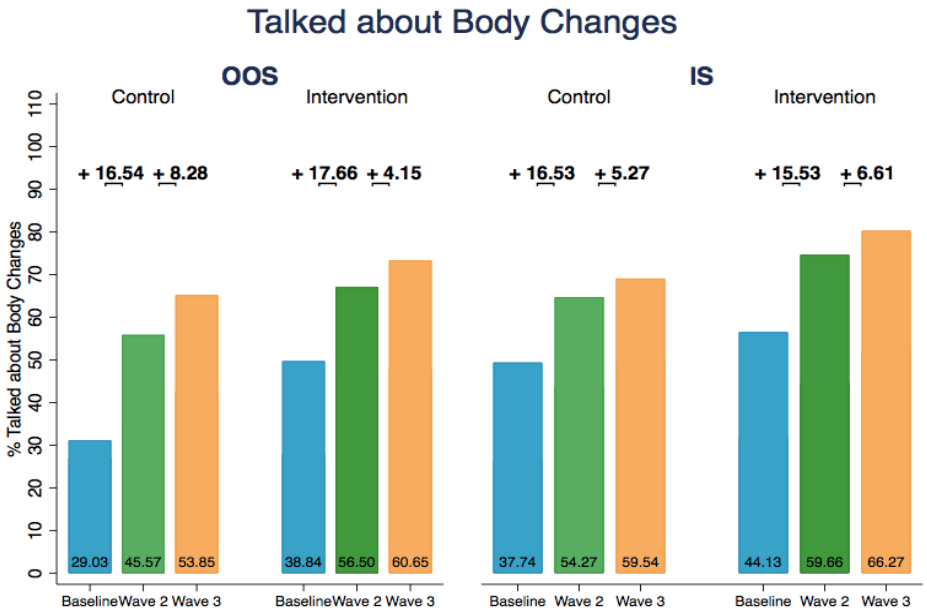


Figure 60

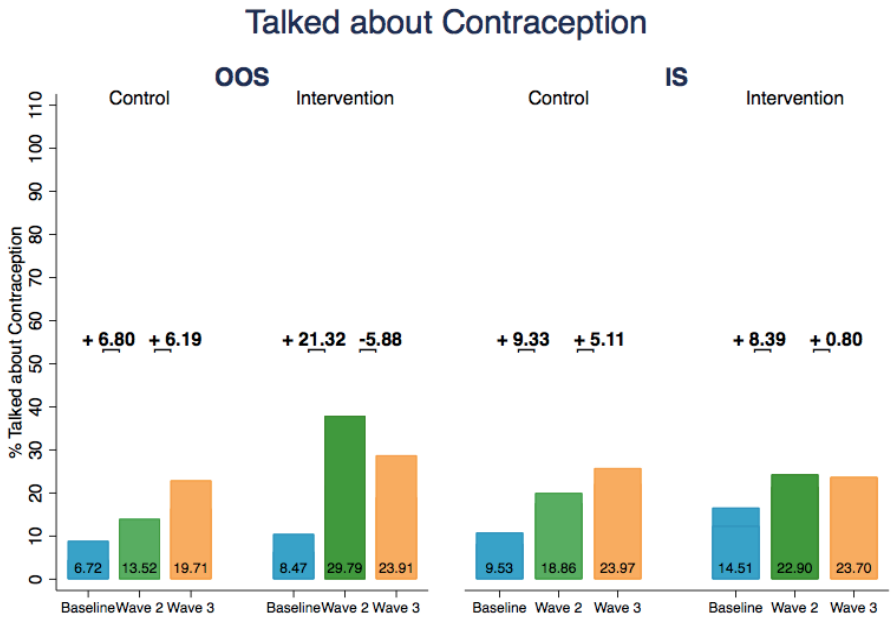


Figure 61

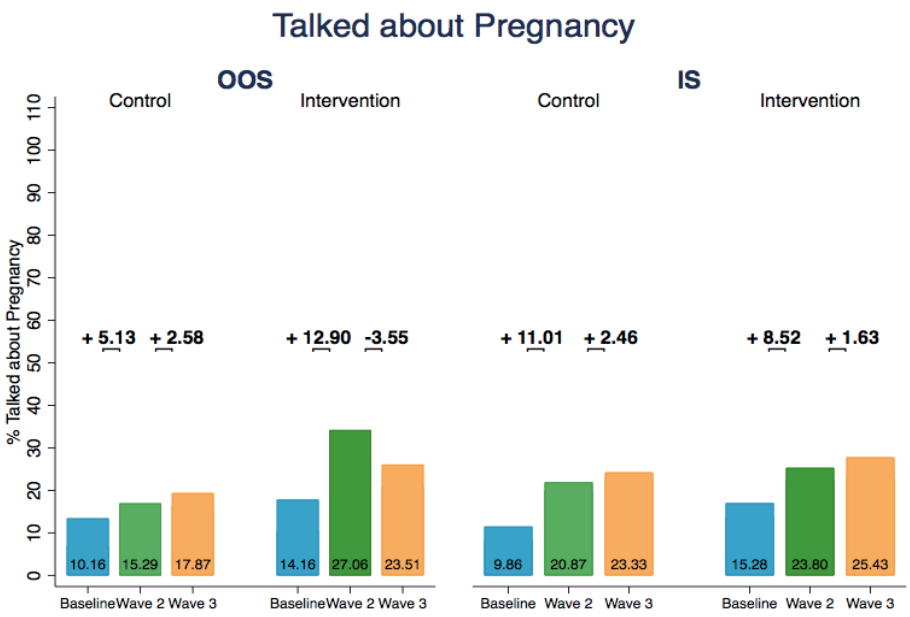
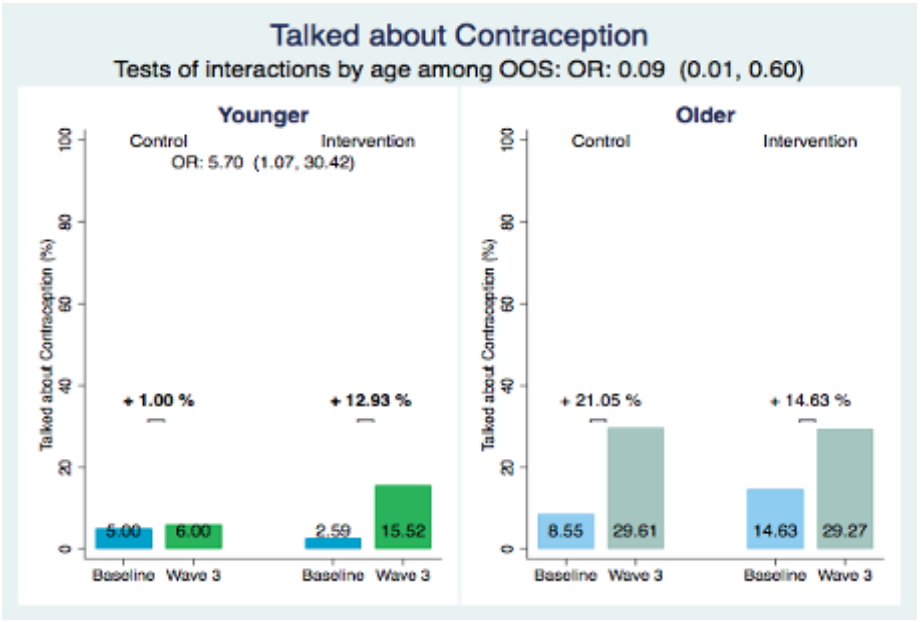


Figure 62



SEXUAL & REPRODUCTIVE HEALTH KNOWLEDGE

Three dimensions of sexual and reproductive knowledge were examined in the GEAS study, including two knowledge indices about how to prevent pregnancy and HIV, knowledge about where to access preventive commodities (condoms and contraception) and contraceptive awareness about all available forms of contraception in the country. While the first two dimensions were investigated at baseline, the last dimension (contraceptive awareness) was only introduced in Wave 2 among adolescents 15 years and older, providing no baseline comparisons between intervention and controls.

Baseline differences

At baseline, a few differences in sexual health and reproductive knowledge between intervention and control were noted between interventions and controls. Specifically, adolescents in the out-of-school intervention group had higher levels of pregnancy knowledge, were more likely to know where to get a condom and where to get contraception than the control group. No such differences were noted among in-school adolescents. In fact, girls in the in-school control group were slightly more likely to know where to get contraception.

Changes over time

Over time, there was a significant increase in pregnancy prevention knowledge, especially between baseline and Wave 2 (Figure 63). Knowledge gains were equally observed among interventions and controls and were only partially sustained over time. Increases in HIV knowledge between baseline and Wave 3 were also noticeable and comparable between intervention and controls (Figure 64). No differences were seen between younger and older out-of-school adolescents (Figure 65). However, older in-school adolescents (aged >=12 at baseline) who received the intervention experienced greater improvement in their knowledge about HIV (0.18 [0.01-0.36], p=0.034) than in-school controls (Figure 66). Despite these improvements, knowledge about pregnancy and HIV prevention remained suboptimal, as adolescents provided only half the correct answers to the knowledge questions.

Figure 63

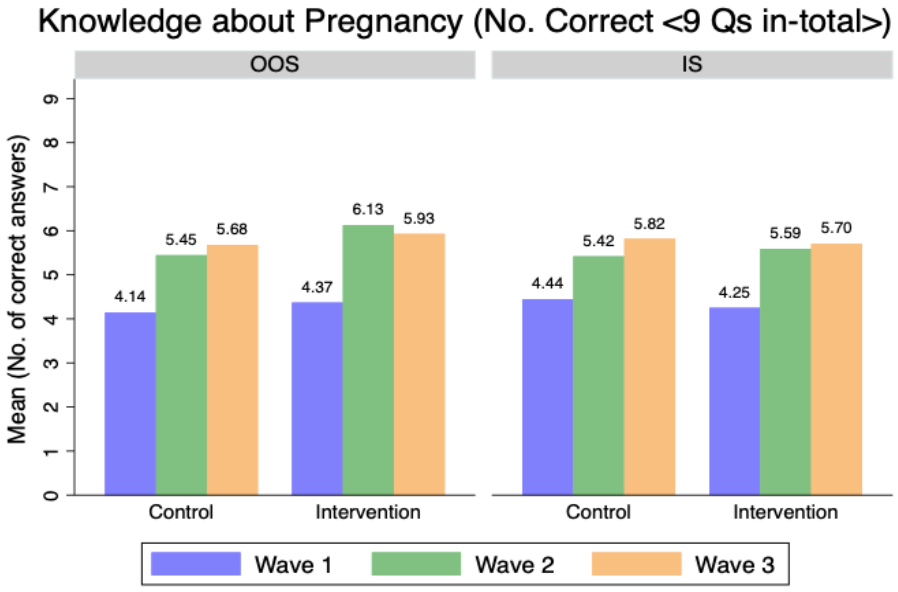


Figure 64

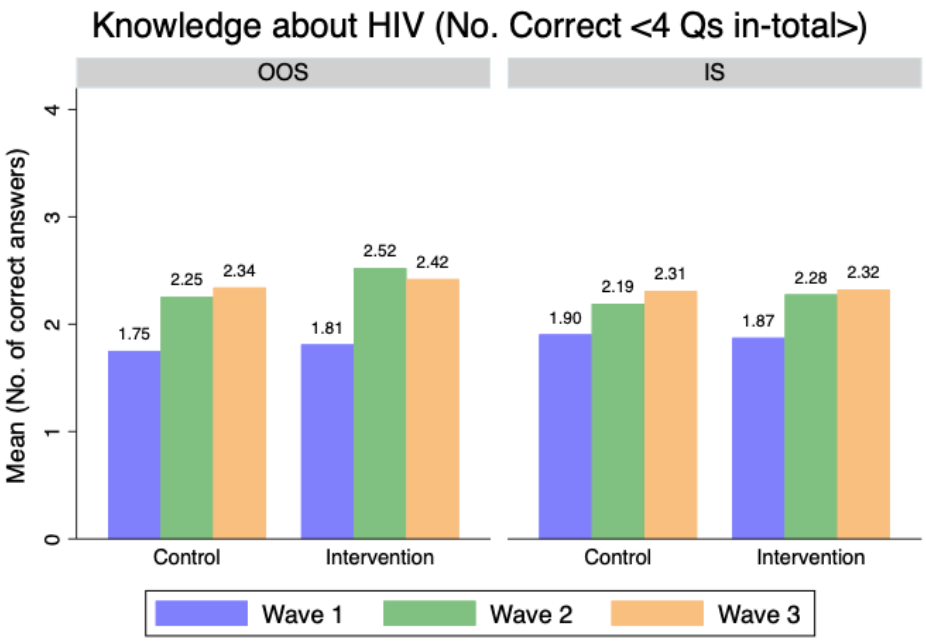


Figure 65

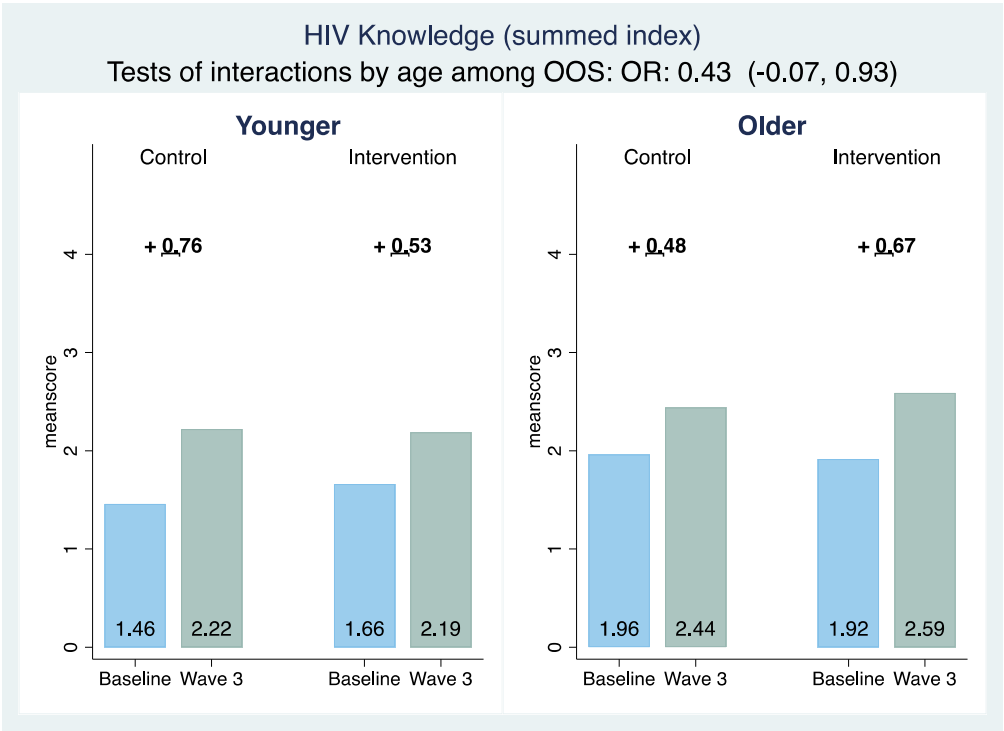
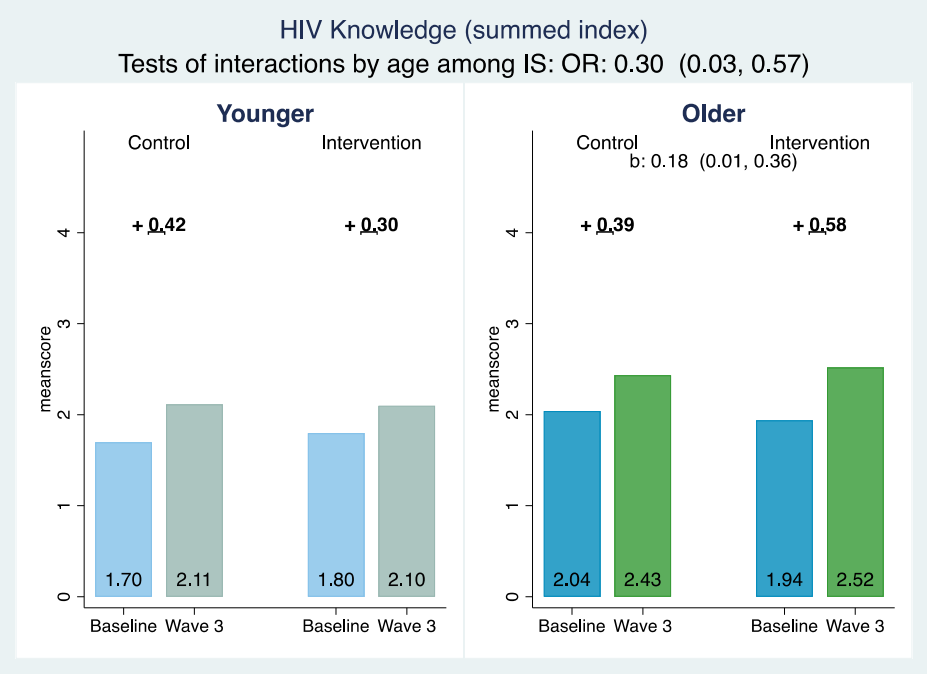


Figure 66



More targeted knowledge about access to preventive services including where to get condoms and where to get contraception improved over time, with no overall difference between intervention and controls, although among out-of-school adolescents, knowledge increased by 21.8% in the intervention group versus 16.3% in the control group (Figure 67). Likewise, knowledge about where to get contraception increased by 10% among in-school intervention girls versus only 3% among the in-school controls (Figure 68).

Figure 67

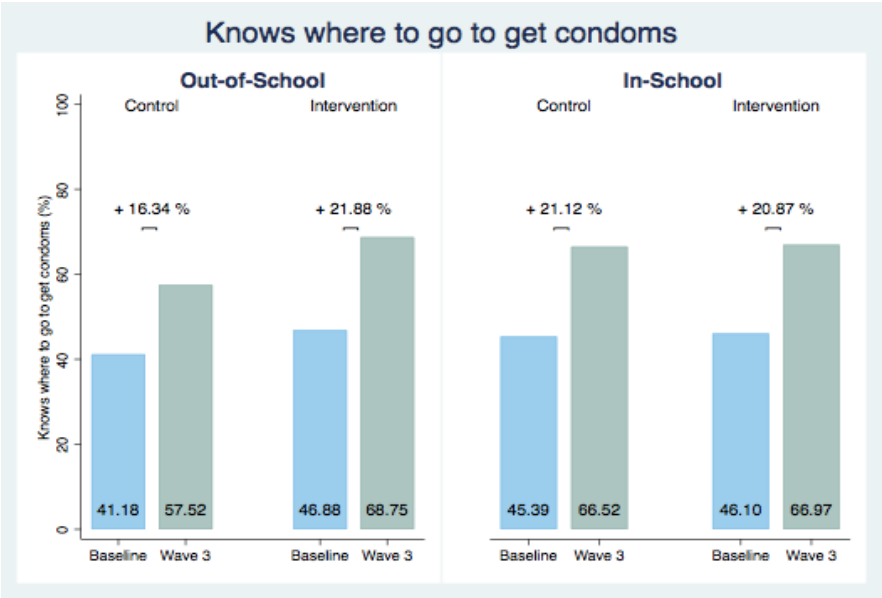
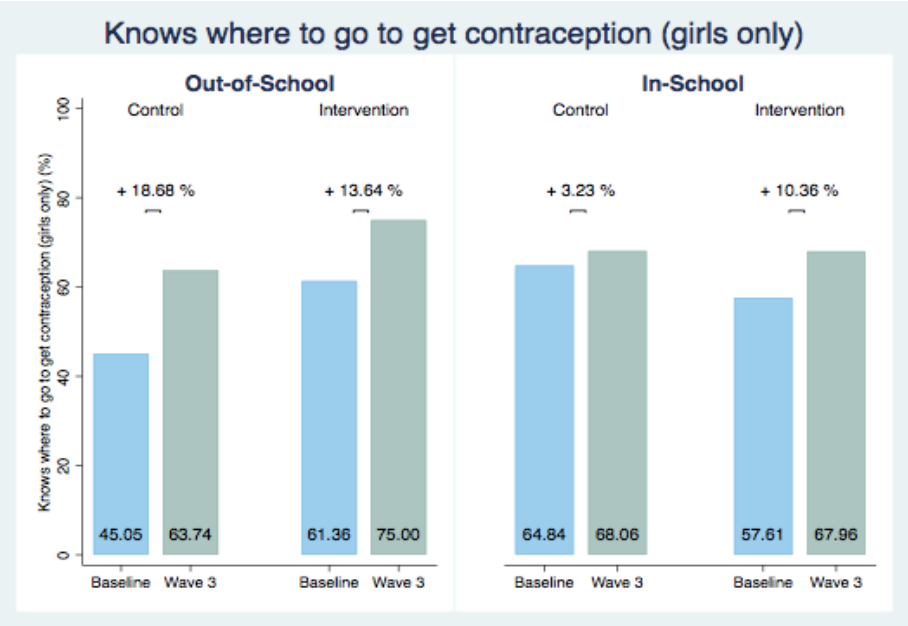
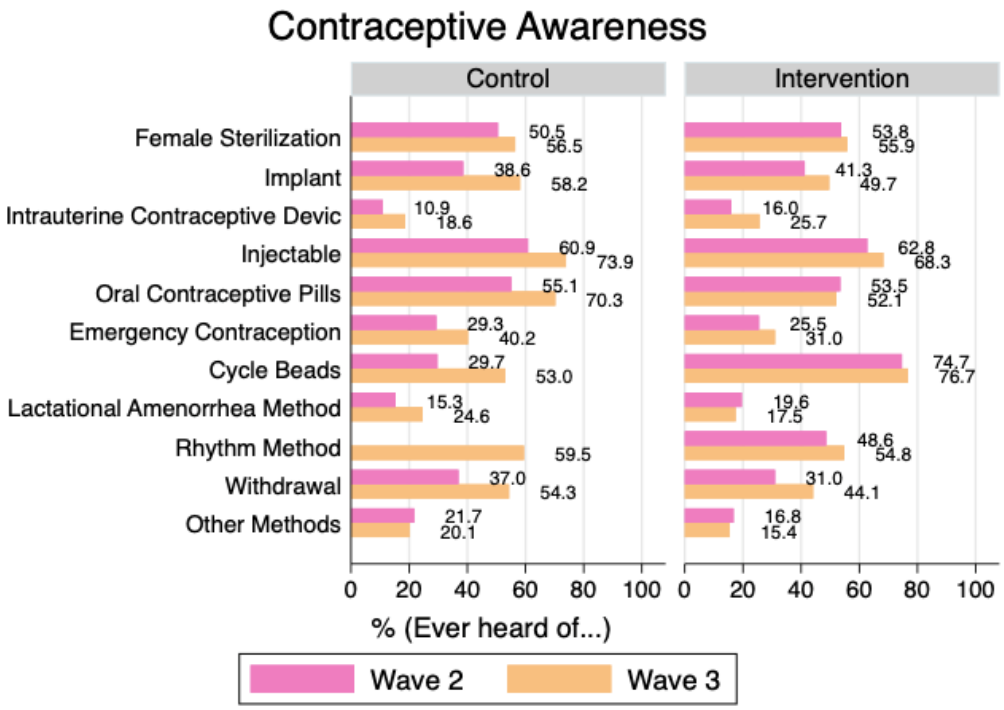


Figure 68



Questions about contraceptive methods were only asked in Wave 2 and Wave 3, and thus the results presented here are not DiD analyses (Figure 69). Contraceptive method awareness among adolescents 15 years and older improved slightly between Waves 2 and 3, in all study groups. By Wave 3, in-school and out-of-school adolescents who participated in the intervention were more likely to be aware of CycleBeads, which was the only method directly discussed in the GUG! intervention in relation to menstrual cycle tracking and preparedness. CycleBeads were not discussed as a contraceptive method per se, but rather used as a way to increase awareness and knowledge of fertility and menstrual cycle. The results also indicate greater awareness of female sterilization (50.91% versus 40.00%), and intrauterine devices (IUDs) (18.18% vs. 7.50%) among in-school adolescents in the intervention, relative to the controls.

Figure 69



TEASING AND VIOLENCE

Baseline differences

At baseline, peer violence perpetration and victimization were common behaviors with no significant differences by study arm. More than one quarter of boys (in-school vs. out-of-school: 28% vs. 27%, respectively) and girls (in-school: 21% and out-of-school: 25%) perpetrated violence against their peers in the last 6 months. Peer violence victimization was less common among in-school girls than boys (17.06% vs. 28.16%).

Changes over time

These experiences (teasing victimization, physical violence perpetration and victimization) were less common in both intervention and control groups in Wave 3 compared to baseline. Teasing victimization dropped more in the intervention group than the controls among in-school and out-of-school adolescents (in-school: -7% vs. -5%, p=0.652; out-of-school: -16% vs. -5%, p=0.070). Conversely, violence victimization decreased more among controls than the intervention group. Trends were not statistically significant according to the study arm. Peer violence perpetration dropped slightly at Wave 3 compared to baseline in both the intervention and control groups, and the decline was more obvious among out-of-school (intervention: -7.54% vs. control: -5.07%) than in-school adolescents (intervention: -1.36% vs. control: -0.87%). Trends in the intervention compared to control arm did not statistically differ for both in-school and out-of-school adolescents.

LIMITATIONS

This Wave 3 report focuses on descriptive analysis of the changes in adolescents' social context over time, as well as trends in knowledge, attitudes and behaviors related to gender, physical, mental, and sexual health. We also report non-adjusted effects of the GUG! intervention on a number of gender and SRH indicators but do not present a more in-depth analysis of the association between gender norms and health and the effect of the GUG! intervention on these associations, which are investigated in complementary analyses that draw upon more advanced conceptual and analytic techniques within cross-cultural comparisons.

While loss to follow up was generally low, it reached 28% among out-of-school adolescents, and 30% in the intervention group specifically, which may potentially bias the evaluation results if young people who were lost to follow up respond differently to GUG! activities than those surveyed at Wave 3. Results from Wave 2 suggested greater impact of GUG! among out-of-school versus in-school participants relative to their respective controls, which was less likely to be significant in Wave 3, although some results suggest a reduction in social inequities between in-school and out-of-school adolescents in the intervention relative to the controls. Lack of statistical power in this analysis may prevent showing such differences, although the greater loss to follow up in the out-of-school intervention group should also raise caution in the interpretation of these trends.

Social desirability bias may drive respondents to underreport sensitive behaviors or familiarity with stigmatized topics, or over-report behaviors that were promoted by the intervention. For instance, a number of risky behaviors were more commonly attributed to friends than self. SRH communications increased among out-of-school adolescents in the intervention group in Wave 2 but decreased in Wave 3, which is unexpected (as the indicator explores any lifetime communication). No such trends were seen among the controls.

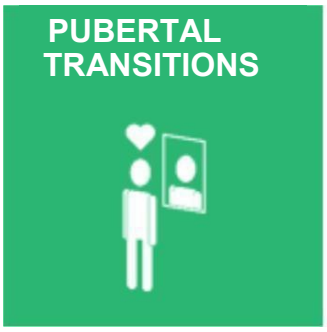
Contraceptive awareness and sexual attitudes questions were only asked of participants aged 15 and older, so the number of respondents in Wave 3 was higher than previous waves and may impact comparative results. Finally, low levels of sexual and romantic relationship history limited findings about sexual history, behavior and contraceptive use among this sample.

SUMMARY OF RESULTS

THE LIVES OF YOUNG ADOLESCENTS IN KINSHASA AND GUG!'s INFLUENCE

Education status is a marker of social and economic inequalities. Out-of-school adolescents face familial, social and economic disadvantages when compared to their counterparts enrolled in school. These are manifested in lower wealth index, literacy, and caregiver connectedness. These disparities translated to a number of unfavorable physical and mental health outcomes for out-of-school adolescents, including delayed menarche and higher depressive symptom scores.

Gender inequalities are widespread in early adolescence and manifest in differential expectations, behaviors and outcomes for boys and girls. A majority of adolescents endorse differential gender expectations about romantic relationships, roles in the household, social traits and division of power, including support for male authority and female subservience. In addition, these expectations translate into divergent behaviors and outcomes for boys and girls, as they pertain to peer violence, mental health and engagement in romantic relationships. While GUG! was influential in shifting adolescents' perceptions towards gender- equal distribution of household labor, this did not necessarily translate into changed behavior or challenge other forms of unequal norms.



GUG! findings reflect how pubertal transitions are complex, generating conflicting feelings among young people, which can become more or less prevalent over time depending on the issue. Many adolescents face these transitions without having communicated with anyone about these changes, contributing to knowledge gaps and feelings of discomfort. However, increased instances of pubertal transition coincided with a decrease of stigma surrounding menstruation. While the GUG! intervention had no significant effect on attitudes toward the pubertal transition, there was some reduction in inequalities as out-of-school adolescents caught up to in-school levels in the intervention group. GUG! also led to increased communication between VYAs and trusted adults about menstruation, sexual relationships and contraception.

Adolescents are ill-equipped for healthy sexual transitions into adulthood, as they lack SRH knowledge and face social stigma accessing reproductive health services. While indicators of sexual health preparedness improved over time, with increased SRH communication that translated to improved SRH knowledge, specifically around awareness of contraceptive methods, misperceptions and stigma remained prevalent. Specifically, adolescents lacked a physiological understanding of pregnancy and HIV acquisition. In addition, many held negative attitudes about contraceptive use among young people who perceived high stigma surrounding adolescent sexuality. GUG! successfully increased some components of SRH knowledge through improved SRH communication, especially among young and out-of-school adolescents, contributing to greater SRH preparedness of young adolescents. There was also increased awareness of family planning, especially for non-prescription methods. While sexual relations are rare, they significantly increase with age and these first encounters are commonly unprotected.

IMPLICATIONS

The results of the longitudinal GEAS and evaluation of GUG! in Kinshasa after the intervention occurred have several programmatic implications.

Some unequal gender expectations and negative outlooks on girls' sexuality tend to increase with age. While gender transformative interventions among VYAs can shift these perceptions, they cannot challenge the broader gender system alone. This indicates a need for substantive parent, caregiver, and community engagement to foster normative gender roles which support adolescent SRH.

In light of the lack of SRH preparedness among young adolescents, greater investment is needed in interventions to improve SRH trajectories including integration of SRH information into the school curriculum of VYAs. Notably, specific and factual information about contraceptive methods is needed to alleviate misperceptions and stigma related to contraception that act as staunch barriers to SRH services for young people. While sexual relations remained uncommonly reported among this cohort at the third wave of this study, longitudinal data allows for an understanding of how these behaviors change over time and the ways normative views about gender, sexuality, and SRH knowledge inform healthy transitions through puberty and into sexual relationships.

Lessons from GUG! suggest that more impactful adolescent programing requires several features:

An early start: While all age groups were responsive, younger VYAs (under 12 years) are more responsive to GUG! activities than older adolescents (based on Wave 2 data), arguing the importance of reaching younger VYAs. With an early start, younger adolescents are more likely to put their acquired skills into practice by engaging in SRH discussions, ultimately resulting in greater gains in SRH knowledge.

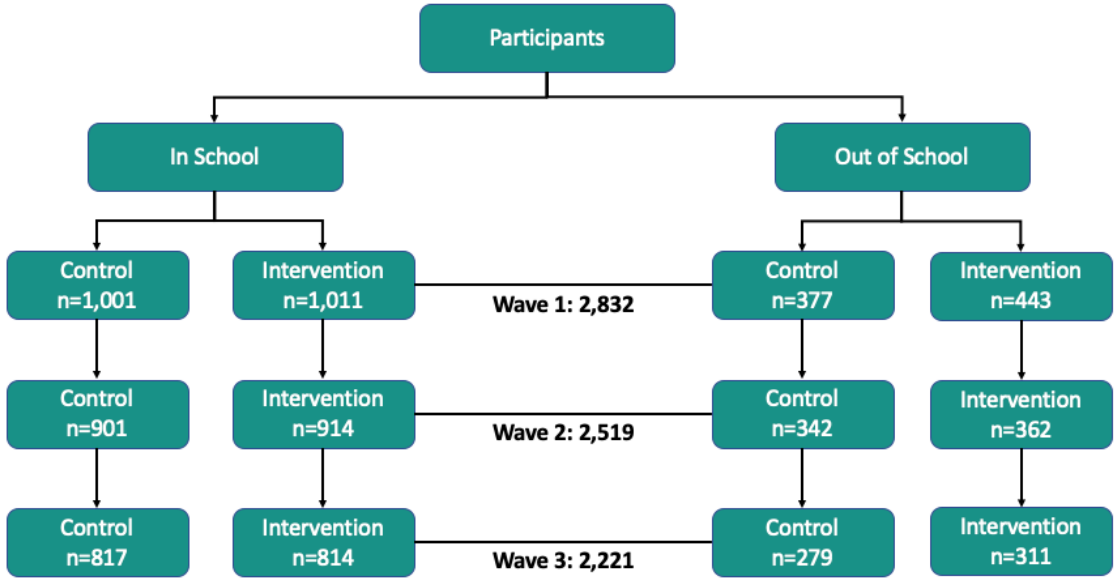
Sustained health information: Wave 3 results suggest some of the early benefits of the intervention regarding health knowledge are likely to fade overtime. This indicates that continued or booster interventions which provide consistent and age-appropriate health knowledge information are needed for sustained effect.

An ecological approach: An ecological approach is likely best suited to address entrenched inequities in gender norms that are practiced and transmitted from generation to generation. Working with parents and community members in addition to VYAs to build support will help to address the social barriers related to healthy adolescent sexuality and reproduction. Parents must be informed about and engaged in sexuality education, as they are ill equipped to discuss matters of pubertal transitions and SRH with their children. However, orientation and information-based activities may not be sufficient to ensure impact. GUG! included dialogue and reflection-based activities for parents and community members, but these activities were not intensive enough to bring about the change needed to shift entrenched gender norms.

Inclusion of out-of-school adolescents: An expansion of interventions to include out-of-school adolescents will reach the young people who may benefit most from programs like GUG! Focusing programs on the most vulnerable adolescents is a promising strategy to reduce social inequalities related to access to school that have profound implications across the life course.

APPENDICES

Appendix A. Flow Chart of Study Population across the Three Waves of Data Collection

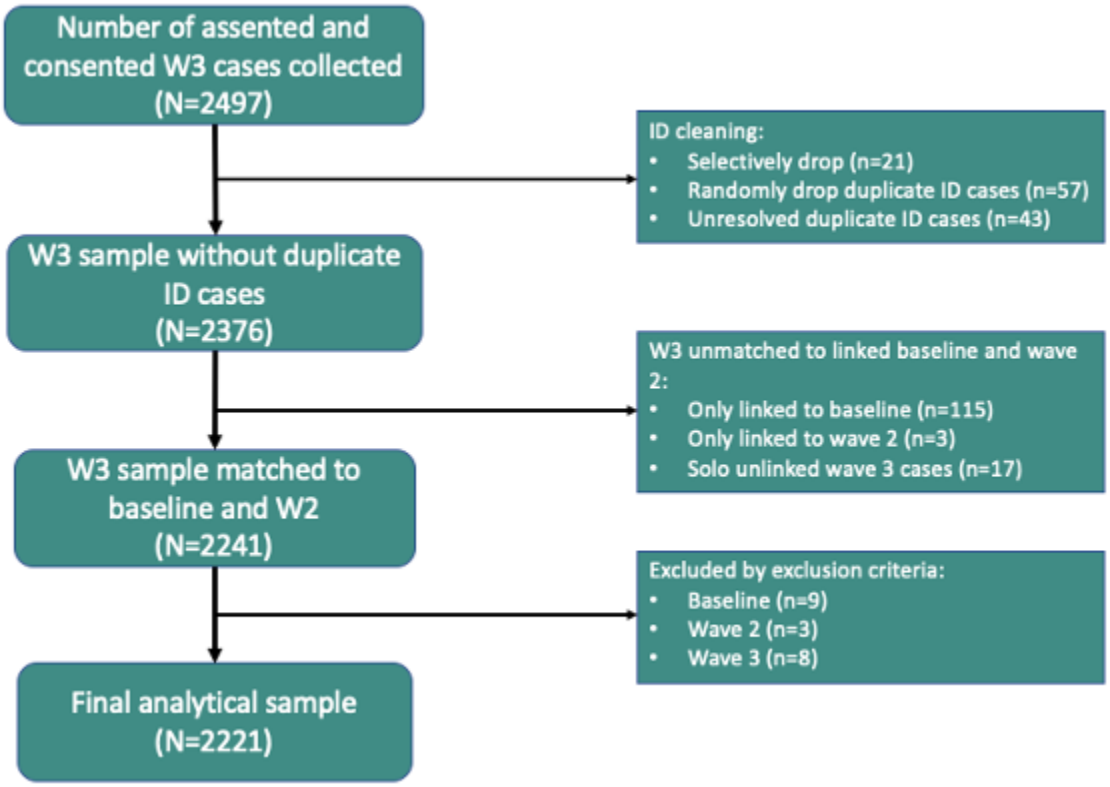


Appendix B. Loss to Follow Up from Baseline to Wave 3

Loss to Follow Up Rates by Baseline Sample Characteristics		Overall (n=2842)		Out of School (n=826)		In School (n=2,016)	
School Status		486 (17%)		196 (24%)		290 (14%)	<0.001
Study Group	Control	222 (16%)	0.148	85 (22%)	0.396	137 (14%)	0.355
	Intervention	264 (18%)		111 (25%)		153 (15%)	
Sex	Boy	241 (17%)	0.815	92 (21%)	0.028	149 (15%)	0.299
	Girl	245 (17%)		104 (27%)		141 (14%)	
Household Composition*	Two parents	237 (15%)	<0.001	58 (20%)	0.126	179 (13%)	0.268
	One parent	146 (19%)		76 (23%)		70 (16%)	
	Grandparents	64 (24%)		41 (31%)		23 (17%)	
	Other	34 (22%)		17 (24%)		17 (20%)	
Wealth Quintile*	Bottom 20%	116 (20%)	0.020	76 (23%)	0.359	40 (16%)	0.743
	20-40%	108 (20%)		61 (27%)		47 (14%)	
	40-60%	94 (16%)		29 (18%)		65 (16%)	
	60-80%	87 (16%)		20 (26%)		67 (14%)	
	Top 20%	74 (14%)		6 (26%)		68 (13%)	

Note: * Sample for each level of these indicators may not add up to the overall sample size or sample size by school enrollment status because only observations with non-missing values were involved in these calculations. Percentage of missingness on household composition is 0.53% (n=15) and is 0.81% (n=23) for family wealth quintile.

Appendix C. Flow Chart of Wave 3 Analytical Population



Appendix D: Per Protocol Analysis Out-of-School Adolescents

	Out-of-school (N=434: control-218; intervention-216)					
	N	**Baseline**	**Wave3**	**Difference (W3-baseline)**	**Delta (difference) 95% CI**	**P-value**
SDS Mean Score						
Control	218	4.16 +/- 0.99	4.40 +/- 0.78	0.24 +/- 1.22	0.10 (-0.13, 0.33)	0.410
Intervention	216	4.15 +/- 0.97	4.49 +/- 0.76	0.34 +/- 1.25		
age (<12, >=12) X study group interaction	434	0.07 (-0.41, 0.54)				0.786
sex X study group interaction	434	-0.18 (-0.65, 0.29)				0.446
ARE Mean Score						
Control	218	2.88 +/- 1.14	3.11 +/- 1.22	0.23 +/- 1.48	0.07 (-0.20, 0.35)	0.599
Intervention	216	3.07 +/- 1.14	3.38 +/- 1.14	0.31 +/- 1.48		
age (<12, >=12) X study group interaction	434	0.13 (-0.44, 0.70)				0.658
sex X study group interaction	434	-0.00 (-0.56, 0.56)				0.994
GST Mean Score						
Control	218	4.46 +/- 0.63	4.53 +/- 0.56	0.08 +/- 0.73	0.08 (-0.08, 0.23)	0.337
Intervention	216	4.39 +/- 0.72	4.55 +/- 0.52	0.15 +/- 0.89		
age (<12, >=12) X study group interaction	434	0.07 (-0.25, 0.38)				0.682
sex X study group interaction	434	-0.28 (-0.59, 0.03)				0.077
GSR Mean Score						

Control	218	4.51 +/- 0.67	4.43 +/- 0.66	-0.07 +/- 0.91	-0.02 (-0.20, 0.15)	0.791
Intervention	215	4.40 +/- 0.78	4.30 +/- 0.66	-0.10 +/- 0.96		
age (<12, >=12) X study group interaction	433	-0.13 (-0.49, 0.23)				0.484
sex X study group interaction	433	-0.13 (-0.48, 0.23)				0.487
Gender Equality in Household Chores (%)						
Control	216	65.28	62.04	-3.24	OR 2.47 (1.40, 4.37)	***0.002***
Intervention	214	59.81	76.17	16.36		
age (<12, >=12) X study group interaction	430	OR 1.19 (0.37, 3.79)				0.774
sex X study group interaction	430	OR 0.53 (0.17, 1.65)				0.273
It is okay to tease a girl who acts like a boy (%)						
Control	217	64.06	68.20	4.15	OR 0.69 (0.40, 1.18)	0.177
Intervention	212	66.98	62.74	-4.25		
age (<12, >=12) X study group interaction	429	OR 1.47 (0.49, 4.41)				0.490
sex X study group interaction	429	OR 1.13 (0.38, 3.35)				0.822
It is okay to tease a boy who acts like a girl (%)						
Control	218	67.43	69.72	2.29	OR 0.88 (0.51, 1.51)	0.640
Intervention	212	69.81	69.34	-0.47		
age (<12, >=12) X study group interaction	430	OR 1.03 (0.34, 3.07)				0.960
sex X study group interaction	430	OR 1.00 (0.34, 2.96)				0.994

Girls should be proud of their bodies as they become women (%)						
Control	215	85.58	96.28	10.70	OR 0.59 (0.20, 1.77)	0.348
Intervention	211	88.63	95.26	6.64		
age (<12, >=12) X study group interaction	426	OR 0.31 (0.03, 2.89)				0.303
sex X study group interaction	426	OR 2.04 (0.22, 18.96)				0.532
Freedom of Movement (meanscore)						
Control	218	1.52 +/- 0.74	1.87 +/- 0.85	0.35 +/- 0.99	0.15 (-0.04, 0.34)	0.112
Intervention	216	1.45 +/- 0.63	1.95 +/- 0.87	0.50 +/- 1.02		
age (<12, >=12) X study group interaction	434	0.18 (-0.21, 0.56)				0.372
sex X study group interaction	434	-0.26 (-0.62, 0.11)				0.167
Voice (meanscore)						
Control	218	2.20 +/- 0.69	2.62 +/- 0.72	0.42 +/- 0.85	-0.03 (-0.20, 0.14)	0.742
Intervention	216	2.26 +/- 0.69	2.65 +/- 0.77	0.39 +/- 0.98		
age (<12, >=12) X study group interaction	434	-0.10 (-0.45, 0.26)				0.596
sex X study group interaction	434	-0.21 (-0.56, 0.14)				0.235
Decision Making (meanscore)						
Control	218	2.70 +/- 0.89	3.25 +/- 0.80	0.56 +/- 1.14	-0.04 (-0.26, 0.18)	0.738
Intervention	216	2.72 +/- 0.89	3.23 +/- 0.83	0.52 +/- 1.21		
age (<12, >=12) X study group interaction	434	-0.01 (-0.46, 0.44)				0.964
sex X study group interaction	434	0.28 (-0.16, 0.72)				0.215

Parent Connectedness (meanscore)						
Control	217	3.24 +/- 0.74	3.05 +/- 0.87	-0.19 +/- 1.10	0.19 (-0.02, 0.40)	0.070
Intervention	215	3.17 +/- 0.79	3.17 +/- 0.84	0.00 +/- 1.09		
age (<12, >=12) X study group interaction	432	0.16 (-0.27, 0.58)				0.465
sex X study group interaction	432	-0.09 (-0.50, 0.33)				0.686
Talked about Body Changes (%)						
Control	213	27.23	52.58	25.35	OR 0.82 (0.48, 1.38)	0.449
Intervention	212	40.57	62.26	21.70		
age (<12, >=12) X study group interaction	425	OR 0.59 (0.18, 1.90)				0.377
sex X study group interaction	425	OR 0.63 (0.21, 1.90)				0.415
Talked about Period Self Care (%)						
Control	5	80.00	80.00	0.00	OR 1.00 (0.01, 134.28)	1.000
Intervention	5	80.00	80.00	0.00		
age (<12, >=12) X study group interaction	10	N/A				-
sex X study group interaction	10	N/A				-
Talked about Pregnancy (%)						
Control	213	12.21	18.31	6.10	OR 1.16 (0.60, 2.22)	0.664
Intervention	210	16.67	27.14	10.48		
age (<12, >=12) X study group interaction	423	OR 1.77 (0.39, 8.06)				0.460
sex X study group interaction	423	OR 2.13 (0.55, 8.19)				0.272
Talked about Contraception (%)						
Control	196	6.63	20.41	13.78	OR 0.86 (0.38, 1.93)	0.715

Intervention	193	10.36	26.42	16.06		
age (<12, >=12) X study group interaction	389	OR 0.35 (0.04, 2.74)				0.318
sex X study group interaction	389	OR 0.75 (0.14, 3.96)				0.740
Talked about Sexual Relations (%)						
Control	213	8.92	15.96	7.04	OR 1.04 (0.47, 2.28)	0.922
Intervention	211	11.85	21.33	9.48		
age (<12, >=12) X study group interaction	424	OR 6.52 (0.49, 86.44)				0.155
sex X study group interaction	424	OR 0.59 (0.12, 2.86)				0.515
Pregnancy Knowledge (summed index)						
Control	134	4.16 +/- 2.17	5.63 +/- 1.74	1.47 +/- 2.52	0.13 (-0.52, 0.79)	0.687
Intervention	124	4.42 +/- 2.12	6.02 +/- 2.04	1.60 +/- 2.85		
age (<12, >=12) X study group interaction	258	1.10 (-0.25, 2.46)				0.111
sex X study group interaction	258	-0.08 (-1.42, 1.25)				0.901
HIV Knowledge (summed index)						
Control	212	1.74 +/- 1.18	2.29 +/- 1.10	0.55 +/- 1.48	0.11 (-0.18, 0.39)	0.469
Intervention	213	1.84 +/- 1.18	2.49 +/- 0.96	0.66 +/- 1.52		
age (<12, >=12) X study group interaction	425	0.39 (-0.19, 0.98)				0.185
sex X study group interaction	425	-0.05 (-0.63, 0.52)				0.852
Knows where to go to get condoms (%)						
Control	118	42.37	55.08	12.71	OR 1.55 (0.84, 2.87)	0.162
Intervention	110	46.36	69.09	22.73		

age (<12, >=12) X study group interaction	228	OR 0.80 (0.18, 3.48)				0.763
sex X study group interaction	228	OR 1.35 (0.38, 4.73)				0.643
Embarrassed to get condoms (%)						
Control	100	70.00	75.00	5.00	OR 0.72 (0.33, 1.57)	0.405
Intervention	104	64.42	62.50	-1.92		
age (<12, >=12) X study group interaction	204	OR 0.97 (0.15, 6.36)				0.973
sex X study group interaction	204	OR 0.40 (0.08, 2.07)				0.275
Knows where to go to get contraception (girls only) (%)						
Control	70	45.71	64.29	18.57	OR 1.11 (0.40, 3.07)	0.839
Intervention	69	62.32	79.71	17.39		
age (<12, >=12) X study group interaction	139	OR 0.36 (0.05, 2.92)				0.342
sex X study group interaction	139	N/A				-
Menstrual Attitudes (ashamed of body when having period) (%)						
Control	14	85.71	42.86	-42.86	OR 2.12 (0.36, 12.60)	0.410
Intervention	25	64.00	32.00	-32.00		
age (<12, >=12) X study group interaction	39	N/A				-
sex X study group interaction	39	N/A				-
Knows when next period comes (%)						
Control	13	69.23	69.23	0.00	OR 3.00 (0.48, 18.57)	0.237
Intervention	24	50.00	75.00	25.00		
age (<12, >=12) X study group interaction	37	N/A				-
sex X study group interaction	37	N/A				-

Tracking periods (%)						
Control	14	78.57	78.57	0.00	OR 1.73 (0.21, 14.08)	0.606
Intervention	24	58.33	70.83	12.50		
age (<12, >=12) X study group interaction	38	N/A				-
sex X study group interaction	38	N/A				-
General Health (%)						
Control	217	77.42	79.72	2.30	OR 0.83 (0.47, 1.45)	0.503
Intervention	215	79.07	78.14	-0.93		
age (<12, >=12) X study group interaction	432	OR 0.74 (0.23, 2.42)				0.615
sex X study group interaction	432	OR 0.32 (0.10, 0.99)				0.048
Body satisfaction (%)						
Control	218	31.19	36.24	5.05	OR 0.85 (0.50, 1.47)	0.565
Intervention	216	28.24	29.63	1.39		
age (<12, >=12) X study group interaction	434	OR 0.67 (0.22, 2.01)				0.478
sex X study group interaction	434	OR 1.24 (0.42, 3.69)				0.694
Depression (meanscore)						
Control	218	2.05 +/- 0.76	2.10 +/- 0.81	0.05 +/- 1.09	-0.06 (-0.28, 0.16)	0.595
Intervention	216	2.14 +/- 0.87	2.13 +/- 0.83	-0.01 +/- 1.21		
age (<12, >=12) X study group interaction	434	0.13 (-0.32, 0.57)				0.576
sex X study group interaction	434	0.05 (-0.39, 0.48)				0.827
Teasing victimization (%)						
Control	218	37.16	28.90	-8.26	OR 0.75 (0.44, 1.27)	0.288

Intervention	215	48.84	33.02	-15.81		
age (<12, >=12) X study group interaction	433	OR 0.54 (0.18, 1.61)				0.268
sex X study group interaction	433	OR 3.16 (1.07, 9.34)				***0.037***
Male						
Control	115	33.91	40.00	6.09	OR 0.47 (0.23, 0.93)	***0.032***
Intervention	114	50.22	37.72	-12.5		
Female						
Control	103	40.78	16.50	-24.28	OR 1.48 (0.64, 3.39)	0.360
Intervention	101	47.52	27.72	-19.80		
Violence victimization (%)						
Control	218	23.39	17.43	-5.96	OR 0.88 (0.48, 1.64)	0.695
Intervention	214	32.71	22.90	-9.81		
age (<12, >=12) X study group interaction	432	OR 2.34 (0.66, 8.36)				0.189
sex X study group interaction	432	OR 1.25 (0.36, 4.39)				0.725
Violence perpetration (%)						
Control	216	35.65	28.24	-7.41	OR 0.93 (0.54, 1.59)	0.780
Intervention	213	38.97	29.58	-9.39		
age (<12, >=12) X study group interaction	429	OR 1.43 (0.48, 4.33)				0.522
sex X study group interaction	429	OR 2.49 (0.84, 7.39)				0.099
Romantic relations (ever) (%)						
Control	164	15.85	32.32	16.46	OR 1.07 (0.67, 1.70)	0.784
Intervention	182	15.38	32.97	17.58		

age (<12, >=12) X study group interaction	346	OR 0.64 (0.20, 2.09)				0.462
sex X study group interaction	346	OR 0.83 (0.33, 2.12)				0.702
Power imbalance in last relation (meanscore)						
Control	7	4.49 +/- 0.88	3.77 +/- 0.85	-0.71 +/- 1.08	1.49 (0.17, 2.82)	***0.030***
Intervention	10	3.14 +/- 1.28	3.92 +/- 1.26	0.78 +/- 1.37		
age (<12, >=12) X study group interaction	17	N/A				-
sex X study group interaction	17	1.12 (-1.73, 3.97)				0.412
Intimacy in last relation (meanscore)						
Control	7	3.33 +/- 0.80	3.80 +/- 0.41	0.47 +/- 0.99	0.02 (-0.93, 0.98)	0.959
Intervention	10	3.27 +/- 0.47	3.76 +/- 0.64	0.49 +/- 0.85		
age (<12, >=12) X study group interaction	17	N/A				-
sex X study group interaction	17	0.45 (-1.57, 2.48)				0.637
Alcohol consumption (%)						
Control	217	5.99	8.29	2.30	OR 1.59 (0.63, 3.99)	0.324
Intervention	216	7.41	15.28	7.87		
age (<12, >=12) X study group interaction	433	OR 1.03 (0.12, 9.26)				0.977
sex X study group interaction	433	OR 0.39 (0.05, 2.94)				0.363

Appendix E: Per Protocol Analysis In-School Adolescents

	In-school (N=1233: control-584; intervention-604)					
	N	**Baseline**	**Wave3**	**Difference (W3-baseline)**	**Delta (difference) 95% CI**	**P-value**
SDS Mean Score						
Control	583	4.28 +/- 0.88	4.41 +/- 0.78	0.12 +/- 1.13	-0.10 (-0.21, 0.02)	0.113
Intervention	647	4.38 +/- 0.82	4.41 +/- 0.75	0.03 +/- 0.99		
age (<12, >=12) X studygroup interaction	1230			0.03 (-0.20, 0.27)		0.777
sex X studygroup interaction	1230			-0.02 (-0.26, 0.22)		0.861
ARE Mean Score						
Control	583	2.95 +/- 1.10	3.13 +/- 1.16	0.18 +/- 1.47	0.10 (-0.05, 0.26)	0.203
Intervention	648	2.81 +/- 1.10	3.09 +/- 1.09	0.28 +/- 1.33		
age (<12, >=12) X studygroup interaction	1231			-0.11 (-0.43, 0.20)		0.490
sex X studygroup interaction	1231			-0.16 (-0.48, 0.15)		0.310
GST Mean Score						
Control	584	4.52 +/- 0.60	4.49 +/- 0.63	-0.03 +/- 0.83	0.01 (-0.09, 0.10)	0.917
Intervention	649	4.45 +/- 0.72	4.42 +/- 0.63	-0.03 +/- 0.89		
age (<12, >=12) X studygroup interaction	1233			0.05 (-0.15, 0.24)		0.625
sex X studygroup interaction	1233			-0.04 (-0.23, 0.16)		0.710
GSR Mean Score						
Control	584	4.49 +/- 0.72	4.33 +/- 0.67	-0.16 +/- 0.91	-0.07 (-0.18, 0.03)	0.184
Intervention	648	4.40 +/- 0.77	4.17 +/- 0.77	-0.23 +/- 1.01		
age (<12, >=12) X studygroup interaction	1232			0.11 (-0.11, 0.33)		0.317
sex X studygroup interaction	1232			-0.05 (-0.26, 0.17)		0.671

Gender Equality in Household Chores (%)						
Control	582	62.71	57.73	-4.98	OR 2.02 (1.47, 2.80)	***<0.001***
Intervention	643	61.74	72.63	10.89		
age (<12, >=12) X studygroup interaction	1225		OR 1.91 (1.00, 3.66)			0.051
sex X studygroup interaction	1225		OR 1.09 (0.57, 2.08)			0.799
It is okay to tease a girl who acts like a boy (%)						
Control	582	62.71	61.68	-1.03	OR 1.06 (0.78, 1.45)	0.687
Intervention	642	55.92	56.39	0.47		
age (<12, >=12) X studygroup interaction	1224		OR 0.93 (0.50, 1.73)			0.826
sex X studygroup interaction	1224		OR 0.80 (0.43, 1.49)			0.485
It is okay to tease a boy who acts like a girl (%)						
Control	584	71.40	63.87	-7.53	OR 1.38 (1.01, 1.88)	***0.046***
Intervention	646	59.75	59.13	-0.62		
age (<12, >=12) X studygroup interaction	1230		OR 1.26 (0.67, 2.38)			0.468
sex X studygroup interaction	1230		OR 0.68 (0.36, 1.28)			0.231
Girls should be proud of their bodies as they become women (%)						
Control	579	92.23	93.78	1.55	OR 1.09 (0.60, 2.01)	0.772
Intervention	644	92.39	94.41	2.02		
age (<12, >=12) X studygroup interaction	1223		OR 1.13 (0.33, 3.88)			0.847
sex X studygroup interaction	1223		OR 1.17 (0.35, 3.95)			0.799
Freedom of Movement (meanscore)						
Control	584	1.60 +/- 0.67	1.75 +/- 0.79	0.15 +/- 0.96	-0.06 (-0.17, 0.05)	0.312
Intervention	648	1.65 +/- 0.71	1.74 +/- 0.81	0.09 +/- 0.99		
age (<12, >=12) X studygroup interaction	1232		-0.03 (-0.25, 0.19)			0.756
sex X studygroup interaction	1232		-0.06 (-0.28, 0.16)			0.598
Voice (meanscore)						

Control	584	2.45 +/- 0.65	2.67 +/- 0.67	0.22 +/- 0.85	-0.06 (-0.15, 0.04)	0.222
Intervention	649	2.60 +/- 0.63	2.76 +/- 0.66	0.16 +/- 0.82		
age (<12, >=12) X studygroup interaction	1233		-0.11 (-0.30, 0.08)			0.248
sex X studygroup interaction	1233		-0.10 (-0.29, 0.09)			0.294
Decision Making (meanscore)						
Control	584	2.67 +/- 0.85	3.23 +/- 0.80	0.56 +/- 1.07	-0.17 (-0.30, -0.05)	***0.005***
Intervention	648	2.85 +/- 0.89	3.23 +/- 0.77	0.38 +/- 1.12		
age (<12, >=12) X studygroup interaction	1232		-0.08 (-0.33, 0.17)			0.530
sex X studygroup interaction	1232		0.04 (-0.20, 0.29)			0.722
Parent Connectedness (meanscore)						
Control	581	3.28 +/- 0.76	3.15 +/- 0.76	-0.14 +/- 0.99	0.06 (-0.05, 0.17)	0.305
Intervention	649	3.21 +/- 0.74	3.14 +/- 0.80	-0.08 +/- 1.01		
age (<12, >=12) X studygroup interaction	1230		0.07 (-0.16, 0.29)			0.567
sex X studygroup interaction	1230		-0.05 (-0.27, 0.17)			0.663
Talked about Body Changes (%)						
Control	575	34.61	57.22	22.61	OR 1.02 (0.75, 1.38)	0.900
Intervention	637	45.53	68.29	22.76		
age (<12, >=12) X studygroup interaction	1212		OR 1.51 (0.80, 2.84)			0.205
sex X studygroup interaction	1212		OR 1.48 (0.77, 2.83)			0.241
Talked about Period Self Care (%)						
Control	27	92.59	70.37	-22.22	N/A	-
Intervention	3	100.00	100.00	0.00		
age (<12, >=12) X studygroup interaction	27			N/A		-
sex X studygroup interaction	27			N/A		-
Talked about Pregnancy (%)						
Control	565	8.32	20.00	11.68	OR 0.75 (0.49, 1.15)	0.181

Intervention	618	15.70	27.67	11.97		
age (<12, >=12) X studygroup interaction	1183		OR 1.64 (0.58, 4.63)			0.350
sex X studygroup interaction	1183		OR 2.40 (0.99, 5.82)			0.053
Talked about Contraception (%)						
Control	541	8.69	21.44	12.75	OR 0.66 (0.43, 1.02)	0.063
Intervention	602	14.62	24.58	9.97		
age (<12, >=12) X studygroup interaction	1143		OR 2.27 (0.83, 6.20)			0.110
sex X studygroup interaction	1143		OR 2.30 (0.95, 5.58)			0.065
Talked about Sexual Relations (%)						
Control	569	6.50	19.16	12.65	OR 0.65 (0.40, 1.04)	0.074
Intervention	633	11.85	22.91	11.06		
age (<12, >=12) X studygroup interaction	1202		OR 1.48 (0.46, 4.79)			0.515
sex X studygroup interaction	1202		OR 3.63 (1.39, 9.50)			***0.009***
Male						
Control	278	6.12	23.74	17.62	OR 0.35 (0.18, 0.69)	***0.002***
Intervention	285	16.14	24.56	8.42		
Female						
Control	291	6.87	14.78	7.91	OR 1.29 (0.64, 2.57)	0.476
Intervention	348	8.33	21.55	13.22		
Pregnancy Knowledge (summed index)						
Control	400	4.32 +/- 2.06	5.68 +/- 2.14	1.36 +/- 2.67	0.19 (-0.17, 0.55)	0.301
Intervention	471	4.26 +/- 1.99	5.82 +/- 2.17	1.55 +/- 2.70		
age (<12, >=12) X studygroup interaction	871		-0.14 (-0.87, 0.59)			0.708
sex X studygroup interaction	871		0.06 (-0.66, 0.78)			0.878
HIV Knowledge (summed index)						
Control	568	1.90 +/- 1.11	2.25 +/- 1.07	0.35 +/- 1.44	0.14 (-0.02, 0.30)	0.079
Intervention	638	1.87 +/- 1.06	2.36 +/- 1.02	0.49 +/- 1.33		

age (<12, >=12) X studygroup interaction	1206			0.22 (-0.09, 0.54)		0.168
sex X studygroup interaction	1206			0.24 (-0.08, 0.55)		0.139
Knows where to go to get condoms (%)						
Control	302	45.03	64.57	19.54	OR 1.04 (0.68, 1.60)	0.849
Intervention	346	47.40	67.63	20.23		
age (<12, >=12) X studygroup interaction	648			OR 1.09 (0.44, 2.74)		0.847
sex X studygroup interaction	648			OR 1.11 (0.47, 2.64)		0.807
Embarrassed to get condoms (%)						
Control	290	68.97	77.93	8.97	OR 0.77 (0.48, 1.25)	0.287
Intervention	335	68.66	72.84	4.18		
age (<12, >=12) X studygroup interaction	625			OR 0.67 (0.24, 1.82)		0.429
sex X studygroup interaction	625			OR 1.83 (0.70, 4.84)		0.220
Knows where to go to get contraception (girls only) (%)						
Control	216	62.96	64.35	1.39	OR 1.49 (0.88, 2.50)	0.134
Intervention	257	58.37	68.87	10.51		
age (<12, >=12) X studygroup interaction	473			OR 0.57 (0.20, 1.66)		0.304
sex X studygroup interaction	473			N/A		-
Menstrual Attitudes (ashamed of body when having period) (%)						
Control	73	43.84	34.25	-9.59	OR 0.77 (0.32, 1.90)	0.576
Intervention	91	39.56	25.27	-14.29		
age (<12, >=12) X studygroup interaction	164			N/A		-
sex X studygroup interaction	164			N/A		-
Knows when next period comes (%)						
Control	67	49.25	70.15	20.90	OR 0.82 (0.33, 2.03)	0.669
Intervention	91	62.64	76.92	14.29		
age (<12, >=12) X studygroup interaction	158			N/A		-
sex X studygroup interaction	158			N/A		-

Tracking periods (%)						
Control	73	57.53	71.23	13.70	OR 0.69 (0.28, 1.74)	0.435
Intervention	88	71.59	76.14	4.55		
age (<12, >=12) X studygroup interaction	161			N/A		-
sex X studygroup interaction	161			N/A		-
General Health (%)						
Control	580	88.10	87.76	-0.34	OR 0.89 (0.56, 1.39)	0.601
Intervention	645	88.06	86.36	-1.71		
age (<12, >=12) X studygroup interaction	1225			OR 1.08 (0.42, 2.82)		0.872
sex X studygroup interaction	1225			OR 1.10 (0.44, 2.71)		0.843
Body satisfaction (%)						
Control	584	39.21	37.33	-1.88	OR 1.25 (0.91, 1.72)	0.168
Intervention	649	36.52	39.91	3.39		
age (<12, >=12) X studygroup interaction	1233			OR 0.59 (0.31, 1.12)		0.104
sex X studygroup interaction	1233			OR 0.61 (0.32, 1.15)		0.128
Depression (meanscore)						
Control	584	1.91 +/- 0.66	2.03 +/- 0.76	0.12 +/- 0.99	-0.06 (-0.17, 0.05)	0.252
Intervention	649	1.96 +/- 0.72	2.02 +/- 0.77	0.06 +/- 0.97		
age (<12, >=12) X studygroup interaction	1233			-0.05 (-0.27, 0.17)		0.630
sex X studygroup interaction	1233			0.08 (-0.14, 0.30)		0.473
Teasing victimization (%)						
Control	582	33.51	26.80	-6.70	OR 0.94 (0.68, 1.30)	0.693
Intervention	644	39.13	30.43	-8.70		
age (<12, >=12) X studygroup interaction	1226			OR 1.21 (0.63, 2.34)		0.565
sex X studygroup interaction	1226			OR 0.70 (0.36, 1.37)		0.296
Violence victimization (%)						
Control	580	20.17	16.38	-3.79	OR 0.90 (0.61, 1.32)	0.581

Intervention	643	25.19	18.97	-6.22		
age (<12, >=12) X studygroup interaction	1223		OR 0.86 (0.39, 1.86)			0.694
sex X studygroup interaction	1223		OR 0.77 (0.34, 1.71)			0.517
Violence perpetration (%)						
Control	578	31.49	29.76	-1.73	OR 1.03 (0.75, 1.41)	0.870
Intervention	643	35.61	34.37	-1.24		
age (<12, >=12) X studygroup interaction	1221		OR 0.72 (0.38, 1.38)			0.321
sex X studygroup interaction	1221		OR 1.17 (0.61, 2.23)			0.644
Romantic relations (ever) (%)						
Control	468	10.26	26.50	16.24	OR 0.90 (0.64, 1.24)	0.509
Intervention	526	11.98	27.76	15.78		
age (<12, >=12) X studygroup interaction	994		OR 1.03 (0.46, 2.26)			0.950
sex X studygroup interaction	994		OR 0.60 (0.30, 1.21)			0.153
Power imbalance in last relation (meanscore)						
Control	16	3.47 +/- 1.01	3.88 +/- 1.02	0.40 +/- 1.07	-0.21 (-0.86, 0.43)	0.510
Intervention	25	3.53 +/- 0.80	3.72 +/- 0.79	0.19 +/- 0.95		
age (<12, >=12) X studygroup interaction	41		N/A			-
sex X studygroup interaction	41		0.06 (-1.22, 1.33)			0.930
Intimacy in last relation (meanscore)						
Control	16	3.60 +/- 0.67	3.67 +/- 0.75	0.07 +/- 1.05	-0.08 (-0.67, 0.51)	0.783
Intervention	25	3.57 +/- 0.82	3.57 +/- 0.59	-0.01 +/- 0.80		
age (<12, >=12) X studygroup interaction	41		N/A			-
sex X studygroup interaction	41		0.05 (-1.15, 1.24)			0.939
Alcohol consumption (%)						
Control	581	7.40	7.92	0.52	OR 1.05 (0.61, 1.83)	0.852
Intervention	645	7.60	8.53	0.93		
age (<12, >=12) X studygroup interaction	1226		OR 1.85 (0.55, 6.29)			0.322

sex X studygroup interaction	1226	OR 0.87 (0.26, 2.88)	0.823

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