



## PROMOTION OF TEACHER-PUPIL INTERACTIONS IN ACCELERATION OF MAKING APPROPRIATE TEENAGE SEXUAL BEHAVIORS AND CHOICES IN KITGUM, UGANDA

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### ABSTRACT

Adolescents are characterized by rapid physical, psychological and social changes and yet they lack the skill to cope with the changes that could result into risky adventures hence a burden of disease. The Ugandan government has adopted policies that create an environment supportive of reproductive and sexual health to improve adolescents' health. At the onset of the project, it was estimated that unwanted teenage pregnancies in Uganda were at 25% of all pregnancies. Only 17% of sexually active adolescents and youth used contraception<sup>[1]</sup> and the biggest contributor is inadequate health education for youth in and out of school. The main aim of the study was to determine the effect of adolescent health interventions in Kitgum district to ascertain the gaps in adolescent sexual health, and make recommendations for future programming. This was through a two-stage pre-post test quasi-experimental comparison study that was carried out with a strategy assessing adolescent behavioral outcomes after exposing them to sexual education interventions. Results indicate that there was a 5.9% increase in pupils joining relationships in school, a 6.2% reduction in the number of pupils practicing sexual intercourse. In addition, 85.5% of all sexual engagements happened with someone not in a relationship with. There was a 20% reduction in condom use among the youth in just a year of implementation with the majority using the condoms in a relation at the endline (66.7%). Delay at age of sexual practice also showed significant improvement. At the baseline 51.9% of the pupils who had a recent encounter were between the 13 to 15 year age category, with 40.7% of the pupils in the 16 to 18 years age category. At the evaluation stage, there was a major shift in the age categorisation. 70.6% of the pupils who had had the most recent encounter were from a more mature age category of 16 to 18 years and a drastic drop in the 13 to 15 age category to 29.4%. Key recommendations include: focusing on Commodity and information availability, Capacity building of Senior Teachers, Utilization of Youth Structures, Acceleration of national Level Advocacy for sexual and sexuality implementation in Schools and District replication of interventions somewhere else.

**KEYWORDS:** Adolescent Sexual Health, Sexual Education and counselling, School reproductive Health, Reproductive Health information and commodities.

### 1. INTRODUCTION

#### 1.1: Status of Adolescent Reproductive Health in Uganda

Adolescents are characterized by rapid physical, psychological and social changes and yet they lack the skill to cope with the changes that could result into risky adventures hence a burden of disease. Although the overall burden of disease may be lower in adolescents compared to other age groups, there are conditions that are more common and have distressing effect in the

adolescent age group. These include reproductive health problems such as early and unwanted pregnancy, unsafe abortion and STI/HIV/AIDS; psycho-social problems such as substance abuse, felony, truancy, sexual abuse.<sup>[1]</sup>

Because of these conditions, the Ugandan government has adopted policies that create a supportive environment of reproductive and sexual health as well as an access to voluntary testing and counselling to improve adolescents' health and life status by influencing future

demographic trends and patterns in a desirable direction.<sup>[2,3,4]</sup> Specifically, the policies are targeted at reducing fertility, maternal mortality, infant and child mortality and increasing life expectancy. The government of Uganda puts emphasis on the notion of addressing adolescent sexual and reproductive health by keeping children and adolescents in school, improving their sexual and reproductive health and increasing contraceptive use and levels of delivery attended by trained health personnel.<sup>[2]</sup>

### **1.2: Adolescent reproductive Health in and out of school in Uganda**

Most education programmes on reproductive health aimed at adolescents and young adults have targeted school pupils and students because they are easily accessible yet school enrolment is generally low in many sub-Saharan African countries.<sup>[5]</sup> Since school enrolment is generally low in sub-Saharan Africa, out-of school adolescents are most likely to Miss Key messages that could have promote their overall reproductive health.

Knowledge of safe sexual behavior such as condom use and family planning issues such as use of oral contraceptives is significantly lower among out-of-school adolescents. This therefore concludes that out-of-school adolescents are less likely to practice safe sex and to use modern family planning methods than in-school adolescents.<sup>[6]</sup> In and out-of-school adolescents have sexuality problems such as unwanted pregnancies, sexually transmitted infections (STIs), defilement, rape, and substance abuse. There is need to focus on adolescent needs and services for both in and out-of-school adolescents with adolescent friendly services.<sup>[7]</sup>

Sexual reproductive health needs and rights of young people with perinatal acquired HIV in Uganda, indicates that young positives are sexually active and are engaging in risky sexual encounters. Yet, existing policies, programs and services are inadequate in responding to their sexual and reproductive health needs and rights.<sup>[8]</sup>

### **1.3: The role of sex education in reduction of teenage pregnancy**

Pregnancy among adolescents is important because it is associated with higher morbidity and mortality for the mother and child. It also has the psychosocial consequences that affect their wellbeing. In countries such as Uganda, early marriages often fuel high incidence of complications from pregnancy and delivery.<sup>[9]</sup> Adolescent sexual activity, within or outside of marriage, can lead to negative reproductive health outcomes.

In response to young people's needs for information and skills to protect their sexual and reproductive health (SRH) and lives, the global community has taken a series of measures to establish a policy framework for such education. The youth face significant threats to their health and wellbeing, further still, the youth under sexual

reproductive health programmes tend to delay the initiation of sex, thereby reducing the risky sexual behavior and incidence of pregnancy and STIs.<sup>[9]</sup>

SRH education aims to achieve a range of behavioral and health outcomes, including reduced sexual activity; reduced number of sexual partners; increased contraceptive use; lower rates of child marriage; lower rates of early, unwanted pregnancy and resulting abortions; lower rates of infection with HIV and STIs; and improved nutritional status. WHO recommends that SRH education be provided within the context of schools that promote health.<sup>[10]</sup>

### **1.4: Problem statement**

At the onset of the project, it was estimated that unwanted teenage pregnancies in Uganda were at 25% of all pregnancies; HIV/AIDS prevalence among adolescents aged 15-24 years in the country was at 4.9% compounded with high maternal mortality by young mothers (15-24yrs) at 44%. Only 17% of sexually active adolescents and youth use contraception, which means the majority of the adolescents are 4 times more likely to die of maternal related complications compared to women above 24 years and high rate of unsafely induced abortions, which has led to many teenage deaths.<sup>[11]</sup> The biggest contributors to the above is inadequate health education for youth in and out of school on the key issues and behaviors.

### **1.5: Objectives**

The main aim of the study was to determine the effect of adolescent health interventions in Kitgum district to ascertain the gaps in adolescent sexual health, and make recommendations for future programming.

### **1.6: Sub objectives**

1. To determine the knowledge of adolescents regarding prevention of early pregnancies.
2. To determine the change in sexual involvement of adolescents after the adolescent sexual interventions.
3. To determine attitude and management of risks of sexual related illness.
4. To determine the gaps in the health education interventions on adolescent sexual and reproductive health.

### **1.7: Justification of the study**

The EAMNCH project aimed at promotion of appropriate pregnancy outcomes. In the project area, like in many parts of rural Uganda, teenage pregnancy was contributing to the burden of poor pregnancy outcomes. To contribute to unwanted pregnancy prevention among the youths, the project working with the District implemented a pilot reproductive Health project among the youth. However, prior to implementation, there was a baseline conducted to ascertain the status of reproductive health services uptake by the youth. This study was commissioned to find out the value addition of the interventions on the youth and Kitgum as a whole.

## 2. METHODOLOGY

### 2.1 Study area

The study area was Kitgum District, that is made up of three constituencies of Chua East, Chua West and Kitgum Municipality which has 09 Sub Counties and three divisions of the municipality. However the study was conducted in five sub counties and these are:- Labongo Akwang, Labongo Amida, Labongo Layamo, Lagoro, and Mucwini. These were chosen because they are the sub counties where World Vision Uganda was operating. Kitgum borders Gulu in the west, Kaabong in the East, Pader in the south and Lamwo in the North.

### 2.2 Study design

This was a two-stage pre-post test quasi-experimental comparison study that was carried out with a strategy of assessing adolescent behavioral outcomes after exposing them to sexual education interventions. Sex education was carried out for one year following a pre assessment of the sexual behaviors of the students in the intervention and non-intervention areas. The same schools that were used for the baseline study are the same schools that were assessed after the intervention.

### 2.3 sampling size determination

The sample size was calculated using the formula for comparative studies (Schlesselman, 1982). The formula is:

$$n = \frac{[(Z_{\alpha/2} + Z_{(1-\beta)})^2 \left(\frac{R+1}{R}\right) p(1-p)]}{(P_0 - P_1)^2}$$

Where by:

$Z_{\alpha/2}$  = The standard normal deviate at 95% Confidence being 1.96.

$Z_{(1-\beta)}$  = The Z-value corresponding to a power of 80%=0.84.

R = Estimated Odds Ratio of the outcome in exposed vs. the un-exposed (Conventionally estimated at 2:1).

$P_0$  = Anticipated Proportion of the adolescents who engage in sexual activities without implementation of safe sex and risk reduction interventions. 21.5% (Jemmott et al., 1998).

$P_1$  = Anticipated Proportion of the of the of the adolescents who engage in sexual activities after implementation of safe sex and risk reduction interventions 12.5% (Jemmott et al., 1998).

p = Weighted average of the two proportions, given as:

$$p = \left(\frac{P_1 + RP_0}{1+R}\right) = \left(\frac{12.5 + 2 \times 21.5}{1+2}\right) = 18.5.$$

$$n = \left[\frac{[(1.96 + 0.84)^2 \left(\frac{2+1}{1}\right) + 18.5(100-18.5)]}{(21.5 - 12.5)^2}\right] = 218$$

Considering a non-response rate of 5%, the sample size was  $(5/100 \times 218) + 218 = 229$  pupils.

Therefore, 229 adolescents were supposed to be selected from the implementation area and 229 for the non-implementation area.

### 2.4: Selection of participants for the study

#### 2.4.1: Selection of adolescents

A representative number of schools from the 10 sub counties were randomly selected for the evaluation. 24 schools out of the total of 46 schools were used at evaluation level. This included 12 from the five intervention area and five from the non-intervention sub counties. The number of primary schools and Pupils sampled from each sub county was done depending on probability proportionate to size of the sub county. These were selected by simple random sampling from a sampling frame of all children within the age range per school. Lists of the students that included the students' ages from each class of each school were obtained. Students from each school who are 12-19 years of age were selected and simple random sampling (balloting method) was applied to select students to participate in the study.

#### 2.4.2: Selection of teachers

Two teachers including a senior woman and man teachers were selected for the interview per school in the evaluation process.

#### 2.4.3: Selection of adolescents for the focus group discussions

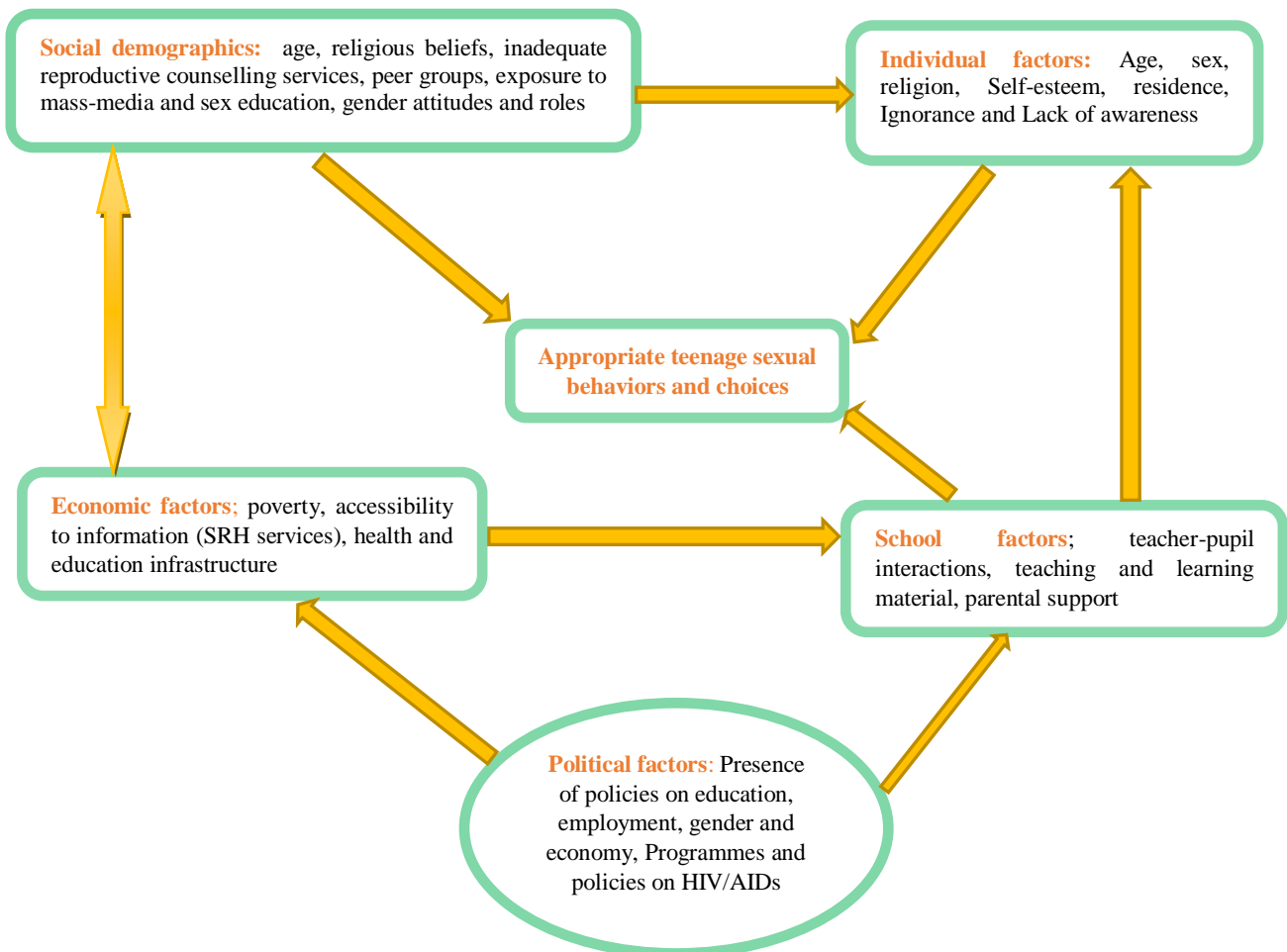
Focus Group Discussions (FGDs) were conducted among pupils in groups of males alone, females alone and a mixture of males and females. Pupils that participated in the FGDs did not participate in filling the semi-structured questionnaire and they comprised of 8-12 members.

### 2.5 Data analysis

The effect of the sex education interventions was assessed by comparing the sexual involvement of adolescents, attitudes towards sex and knowledge of adolescent students towards prevention of early pregnancies in intervention and non-intervention schools.

Epidata version 3.1 was used for data entry purposes. The data was then transferred and analysed using Stata version 13. Univariate analysis was used to generate frequencies and proportions for dependent and independent variables. Themes and sub-themes were generated from the qualitative data. Key quotations were included among the results presented as text and the information was triangulated with the quantitative data findings to gain a deeper understanding of adolescent sexual behaviour in Kitgum district.

**2.6 Conceptual framework**



**Figure 1: Pilot implementation conceptual Framework.**

The study conceptualized appropriate teenage sexual behaviors and choices as being accelerated by promoting teacher-pupil interactions. Appropriate teenage sexual behaviors and choices are also influenced by socio-demographic characteristics, political factors, economic factors and school factors.

However, political and economic factors indirectly influence these behaviors through school, socio-demographic factors such as effects of education policies on teaching and learning materials for improvement on sexual reproductive health and also inadequate health and education infrastructure can affect reproductive and counselling services. Socio-demographic, school, and individual factors directly influence appropriate teenage sexual behaviors and choices.

**2.7 Data storage throughout implementation**

To ensure proper and consistent data, before the start of the project, a tool was developed and reviewed extensively including seeking input from the District health team and the education sector. The tool was used to collect baseline data, which became the basis for implementation. The same tools were employed during

the evaluation processes. It was from this that comparison was done using the same analysis criteria.

**2.8 Ethical considerations**

The study went through the Makerere University School of Public Health Higher research and Degree Ethical Approval through the Internal Review Board and was given a reference number 372. This approval then accelerated the acquisition of the Approval from the Uganda national Council for Science and technology that provided a presidential approval letter with a reference number SS 3199. Introductory letters to the selected schools were obtained from the office of the DHO Kitgum district. Written informed consent was obtained from respondents above 18 years and for those below 18 years, their parents and guardians after thoroughly explaining the purpose of the study was used to obtain consent for their children to participate in the study. Respondent’s confidentiality and privacy during the study was ensured.

**3.0 Study Findings**

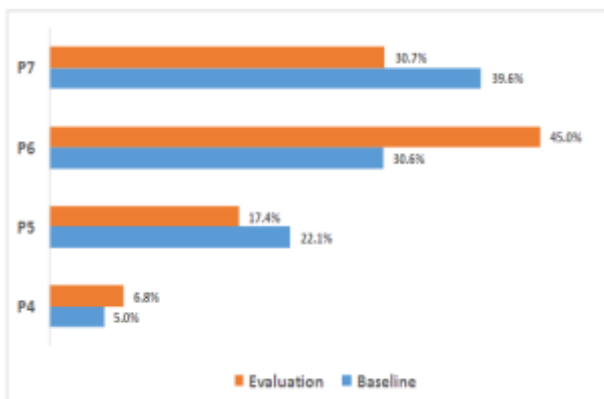
Study findings presented are in accordance to an implementation framework. The project conducted a brief baseline in the study area before supporting the Sex

related education in the schools and then did the implementation before going back to the same schools to carry out an endline after the agreed upon timelines. The results presented below shall therefore take 2 broad sections: 1) The comparison of the indicators in the implementation area prior to implementation and after the implementation timelines, 2) Then there is an aspect of comparing the indicators in the implementation site with other randomly selected sub counties. This section also includes a knowledge about pregnancy assessment conducted in both implementation and comparison sub counties with in Kitgum District.

**3.1 Assessment of the contribution of Teacher-Pupil interaction in acceleration of making appropriate teenage sexual behaviors and choices**

**3.1.1 Social Demographic factors**

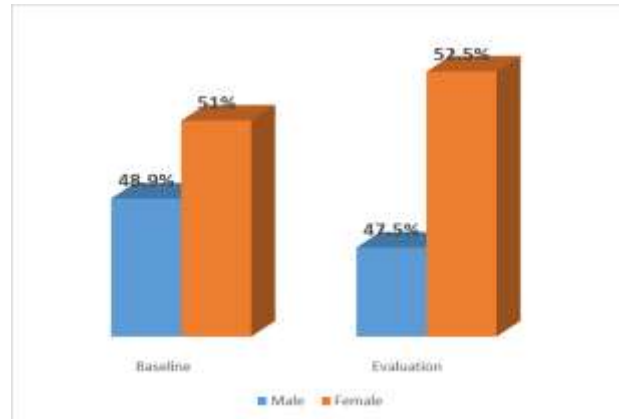
The project focused its implementation to classes with teenage pupils. The District guided the team to focus on class from P4 to P7 as classes below that are under the age category required. Figure 2 below shows the percentage participation in the study per class. During the Baseline process, P7 provided the highest number with a 39.8% while P4 provided the least of 5%. This was probably because for a pupil to participate you had to confirm that you are 12 years and above. This therefore meant that majority of P4 pupils were below that age. However, during the evaluation process P6 provided 45% participation but again P4 provided the least of 6.8% even though this presented a 1.8% improvement in participation in relation to the baseline. Generally, it was observed that participation in the study improved or increased from lower classes to higher classes and this was due to the age inclusion factor.



**Figure 2: Pupil Participants per class.**

The other important demography that was considered was the sex of the pupils who participated in the study. Generally, for both the baseline and evaluation process more girls with over 50% participated in the Survey. Figure 3 below shows that there were less boys at evaluation than at the baseline process by a 1.4% and this contributed to more girls at evaluation than at baseline. However, this demography is in agreement with the natural fact that there are generally more girls available for an inclusion sample than boys in Ugandan

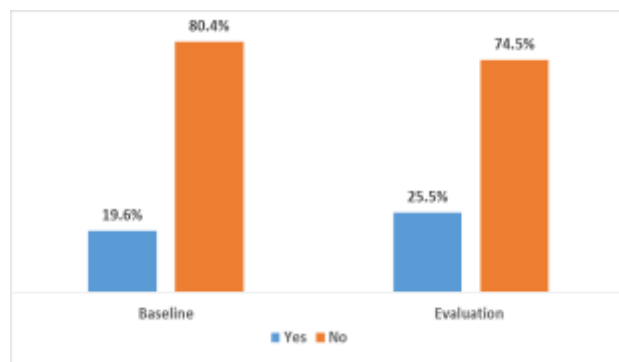
population. This could also point to the fact that there are more girls in a Ugandan primary school than boys, a fact that needs to be ascertained with proof moving forward.



**Figure 3: Pupil distribution by Sex.**

**3.1.2 Pupil Sexual behaviours and practices before and after the intervention**

The project implementation team focused on finding out whether the pupils in the intervention area had any boy or girl friend and whether having one has any effect on sexual behavioral. During the baseline processes the pupils were asked whether they are in any relationship with any one at the moment. 19.6% of the pupils confirmed with a positive response of have a boy or girl friend at the moment. When the same question was asked to the pupils at the evaluation time, 25.5% of the pupils confirmed that they are in a relation presently. This response presented an increase in the number of pupils in a relationship with a 5.9% increase from the baseline. During the implementation of the project, senior teachers had decided to discourage couple formation since the teachers thought it was a sure way for pupils to engage in early sexual behaviours. However this key message did not in any way reduce the number of pupils in a relationship, in fact it led to an increase as seen in figure 4 below.



**Figure 4: Pupils with a sexual partner.**

When the project implemented the strategy of prevention of early sex behaviour, and trying to encourage pupils to delay formation of couples, the project also implemented the strategy of discouraging early sexual behaviours. The posts around the schools compounds included that

mentioning that sex can be delayed and delaying sex has its advantages to the performance of the pupil in society. So as part of the implementation strategy, pupils were asked if they have had sex in the last year, even if it meant only once. Figure 5 shows that at the baseline 11.5% of the pupils had practiced sexual intercourse how ever this number reduced to 5.3%. its important to also note that a large number of pupils in primary schools in Kitgum are actually not involved in sexual intercourse behaviours. Up to 80% of pupils are actually abstaining and this is a good indication for good sexual behaviour at that level.

Another key observation is that there seems not to be a linkage between being in a relationship and sexual behaviour. Figure 4 and 5 explain this better. We have more pupils in Figure 4 showing that they have formed couples but have less actually practicing sexual intercourse as shown in figure 5. This could be due to the sexual education against early engagement in sexual intercourse.

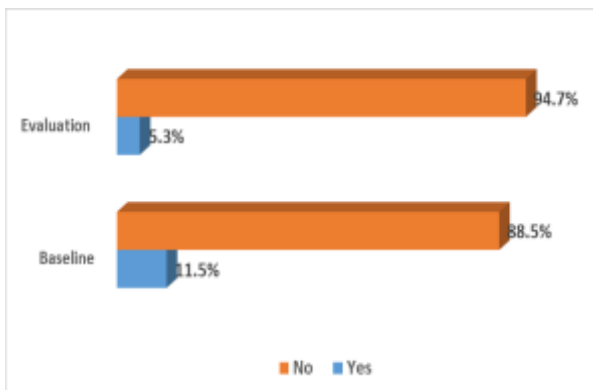


Figure 5: Have Had Sex in the last one year.

Another interesting finding at the evaluation stage was that 85.5% of all the pupils who claimed to have had sex in the past one year, claimed that they had practiced random sex. Pupils claimed that they had sex out of a relationship with a negotiated status with a partner who they did not have any intimade attachment to. The other aspect of this question asked is that the 85.5% Pupil shown below are not in any relationship at the time of the sexual intercourse. This is as ahown in figure 6 below.

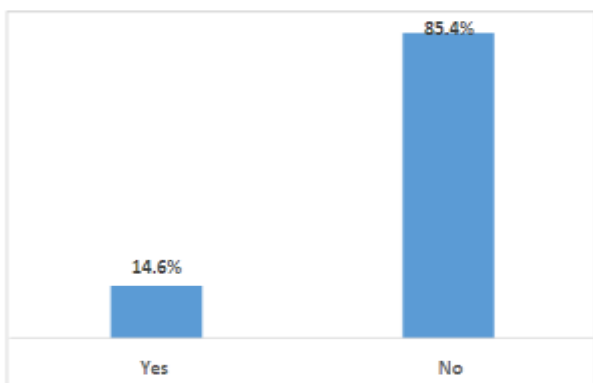


Figure 6: Sexual practice in a sexual relationship.

Further analysis at the evaluation was done focusing on the pupils who mentioned to be in a relationship. The evaluation team was looking at issues around sexual practice in a relationship. Figure 7 below shows that 70.6% of the pupils with boy/girlfriends actually have had sexual intercourse with them. This is not seen in general terms, means that there is a linkage between having a boy/girlfriend and sexual behavior of pupils in Kitgum.

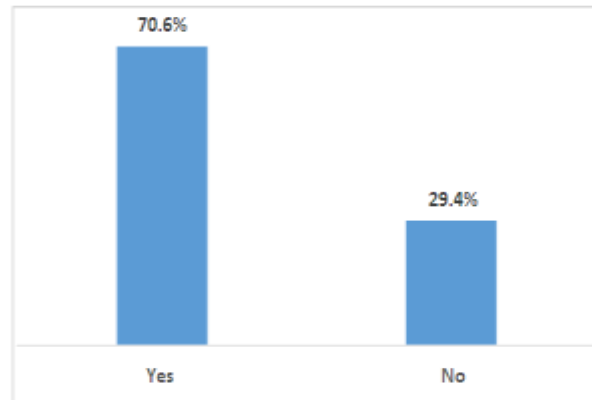


Figure 7: Those in a relationship who have Ever had sex with the partner.

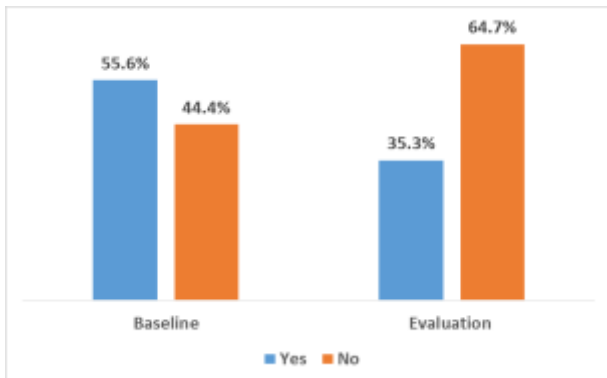
### 3.1.3 Pupil safe sex practices

The project suggested and implemented a community-based availability of condoms strategy as one of those aimed at making them readily available for the Youth. It was agreed that one of the key barriers to access to reproductive Health services and commodities is assuming that the pupils can easily walk into a health center or clinic and ask for a pack of condoms. Further still, in Uganda it is a policy not to make condoms available in primary school. So, the project needed to fit into the Ugandan policy guidelines to ensure that condoms are available for any pupil who would wish to engage in sexual intercourse.

The project decided to collaborate with youth groups out of school and agree on a convergence appropriate areas to make condoms readily available for the youth. Condom outlets all over youth centers were initiated and equipped periodically. These outlets were popularized through the Youth forums as a way of practicing safe sexual behavior and prevent pregnancy.

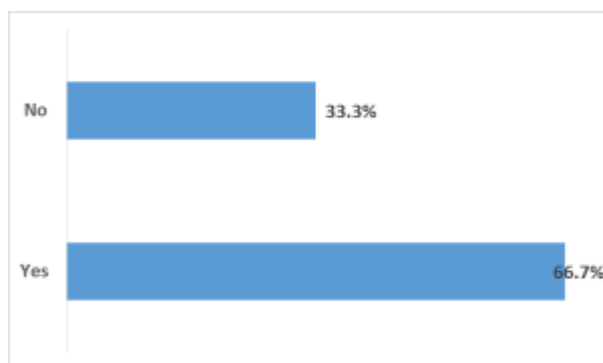
Figure 8 below presents the progress with condom use during sexual intercourse. The focus was on those who claimed to have had sexual intercourse in the past year. The relevancy was to ascertain whether they actually used a condom during the sexual encounter. At the baseline, 55.6% of the pupils claimed they had used a condom in their most recent sexual encounter; however, this drastically reduced to 35.3% at the evaluation time. The study in this case did not achieve what it assumed would be achieved by making these condoms available in youth outlets, in fact there was a 20% reduction in condom use among the youth in just a year of

implementation. This could be caused by the fact that older individuals access the youth centers and this could be a barrier again for these younger children in Uganda. The other reason could be that the pupils cannot be seen or found with condoms in their bags or pockets and therefore picking them from youth centers and keeping them around would be a risky issue. The other factor is that since majority of pupils having sexual intercourse are not in a relationship, it may be increasingly difficult for them to actually have a plan for sexual intercourse and therefore risk carrying condoms with them.



**Figure 8: Condom Use among Sexually active students.**

Focusing on the evaluation, focus was also included on the pupils who are in a couple relationship. The team was interested in knowing those with a boy or girl friend, who are actually having sexual intercourse using a condom. Of all the pupils who claimed to have had a recent sexual encounter with their couple, 66.7% actually used a condom. This good practice contributed to the project milestones. Figure 9 provides a detail of this.

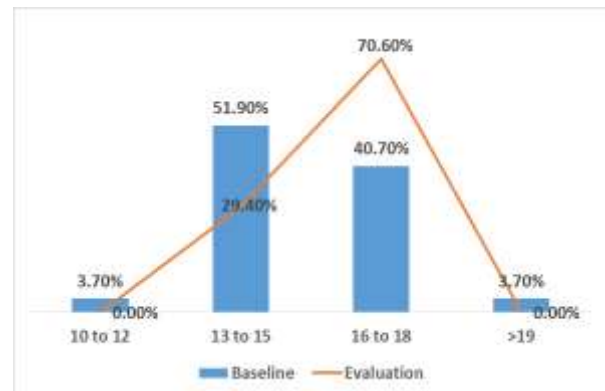


**Figure 9: Condom Use among those in a relationship.**

The Project also focused at the age categorisation of all pupils who have had a most recent sexual encounter. The project encouraged delay of sex since making a right decision makes more sense as the pupils grow. At the baseline 51.9% of the pupils who had a recent encounter were between the 13 to 15 year age category, with 40.7% of the pupils in the 16 to 18 years age category.

As shown in Figure 10, at the evaluation stage, there was a major shift in the age categorisation. 70.6% of the

pupils who had had the most recent encounter were from a more mature age category of 16 to 18 years and a drastic drop in the 13 to 15 age category to 29.4%. This might have been due to the key message about the dangers of early sexual practice and the dangers associated with such behaviours to pupils while still young.



**Figure 10: Age at sexual practice.**

### 3.1.4 Access to sex education within the community

The most effective tool in helping the pupils to make appropriate choices when it comes to sexual behaviour is by making the relevant information, commodities and support available for them at all time. The project looked at how this service is readily available for the pupils. The project appreciated that this process can be demand created by the pupil or initiated by the person having the support and willing to offer it to the pupil even when not called for at that particular time.

When asked, who the pupils are willing and prefer to have a sexual talk with. The team was looking at the most effective preferred channel to have the pupils supported when that need arises. At the baseline, 37.1% of pupils preferred as first choice to have a sex talk with fellow peer, followed by the Senior teacher at school with a 33.5% and then parents with a 22.2%.

However as seen in figure 10, at the evaluation time, a year later, the pupils overwhelmingly preferred having these discussions with the Senior teacher scoring a 44.7% and parents still futuring as an important avenue for sex talk and education with a 21.1% and peers declined as a preferred choice of source of information.

The project made a deliberate effort to train senior teachers, 2 per school, one male and the other a female. The intended outcome was that Senior teachers would be readily available to offer support to the pupils whether the pupils have demanded for the information or not.

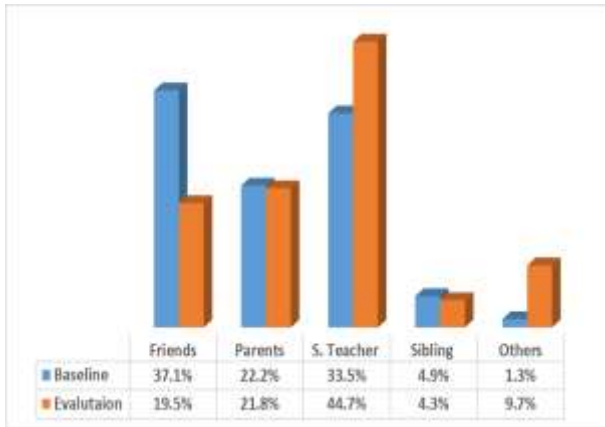


Figure 10: Most Preferred sex talk sharing.

The analysis above was based on the first preferred choice made by the pupils when asked who they would prefer sharing sexual talks with. However the pupil were further asked to provide a second and third choice in case the first choice is not available to offer the Sexual discussion and talk. Figure 11 below provides an analysis of the results from that preference.

Of the pupils who provided a 2<sup>nd</sup> choice preference, 50.5% preferred having a discussion with an elder brother or sister in case their first preference was not available. Senior women or men took 36.5% of the preference as second choice for a number of pupils, parents took 35.6% share of this preference. The results below focused only on the evaluation period and points to the fact that pupils will try to exercise their preference and further have options for any sex related issue before they actually make a decision for themselves.

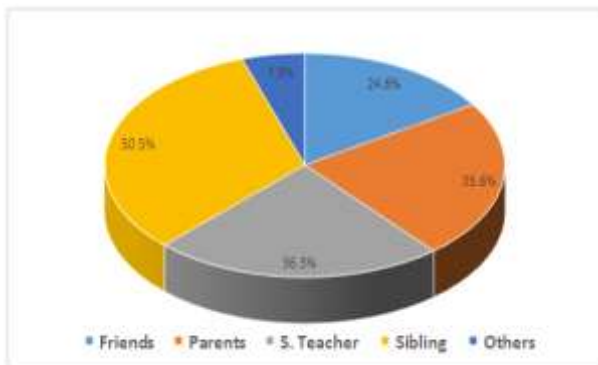


Figure 11: Multiple preferred choice for Health talk.

**3.2 Assessment of the comparison of Teacher-Pupil interaction in acceleration of making appropriate teenage sexual behaviors and choices in an implementation and non-project areas**

The project during the evaluation period decided to venture into a simple comparison assessment. The key deliverables were linked to the indicators and the desired achievements that the implementation site wished to have. The results presented below will be focusing on 3 aspects of the study, the initial aspect would be a general show case looking at both the implementation and non-

implementation areas, then the implementation area alone and then the comparison area alone. These 3 aspects shall be placed on the same graph throughout the results presentation.

**3.2.1 Social demographic results**

Through the sampling frame, 458 pupils were in total sampled from both the implementation and comparison areas. The intervention area contributed 70.3% (322 pupils) of the study population with the comparison providing only 29.7% (136 pupils). It should be noted that the study team could not get an equal sample from the comparison area because it was not easy to get as much pupils as possible to open up to such a study in the time frame set for the data collection process. As seen in Figure 12, more pupils from the implementation area volunteered information.

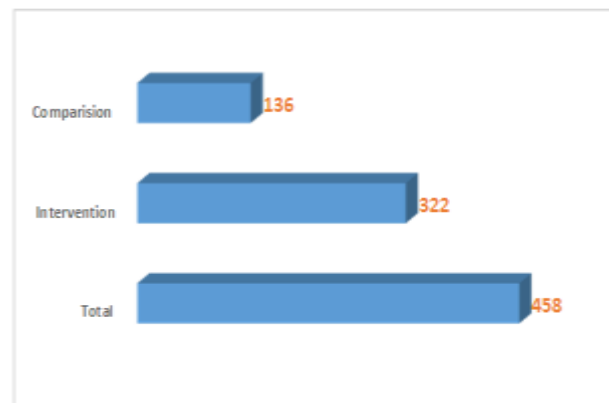


Figure 12: Demographics by numbers.

Further analysis of the data as shown in figure 13 below shows that, in total, respondents were more female than male with 55.5% girls offering to respond and 44.5% of them being boys. The same trend was registered with the intervention area with 52.5% of the study team being female pupils and 47.5% being male pupils. Further still an even higher trend was registered with the comparison area with 62.5% of the respondents being girls and 37.5% being boy pupils.

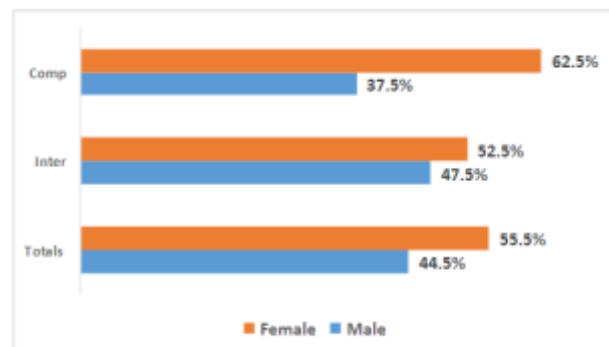


Figure 13: Disaggregation by sex.

As indicated earlier, the study was only allowed to focus on pupils from P4 to P7. As shown in Figure 14 below, generally majority (40.2%) of the pupils who responded



are from P6, followed by a 34.3% from P7. P4 provided only 6.8% of the pupils and this is as expected since for the age categories required to respond, a few could be searched for in P4.

The intervention area almost followed the same trend as the total population, however for it, 45% of the pupils came from P6, 30.7% came from P7 and exactly 6.8% showing as the least population came from P4. Focusing on the comparison area, the trend changed with P7 providing the highest number of respondents (42.6%) and P6 and P5 almost providing the same number of pupils with 28.7% and 22.1% respectively. However, the comparison area almost agreed on the least respondents provided from P4 with 6.6%.

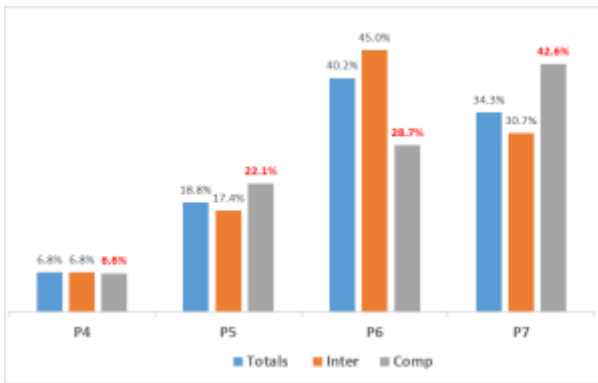


Figure 14: Distribution by Class.

**3.2.2 Pupils Sexual behaviours**

Generally as seen in the the figure 14 below, majority of the respondents did not have a boy or girlfriend (73.6%). However it should be noted that when the focus came to the Intervention area, this percentage rose to 74.5% while for the comparison area it was at 71.3%. This therefore means that the intervention area registered the least pupils claiming to be in a relationship. The percentage difference was a significant 3.2% and this could be attributed to the intervention of appropriate sexual behaviours that promote the delay of relationships at this stage in the education cycle.

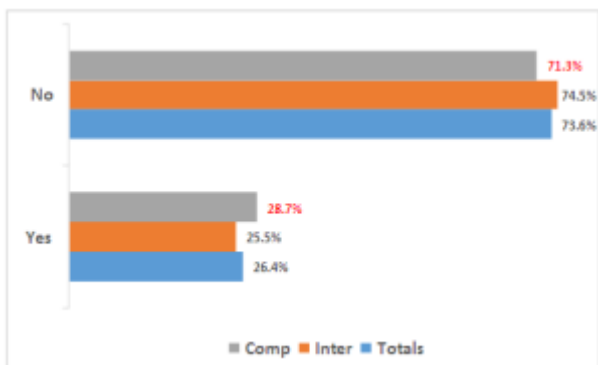


Figure 14: Pupils with a girl/boy friend.

The pupils when asked whether they have been engaged in sexual intercourse in the one year proceeding the study, generally 7.3% of the pupils confirmed that they

have been engaged in sexual activity. However, for the intervention area only 5.3% claimed to have been engaged in sexual activity. Interestingly 13.2% of the pupils in the comparison area confirmed having engaged in sexual intercourse. The study reveals that 7.9% more pupils engaged in sexual intercourse from the comparison area than the intervention area. This could be because more pupils in the comparison area were involved in relationships than in the intervention area.

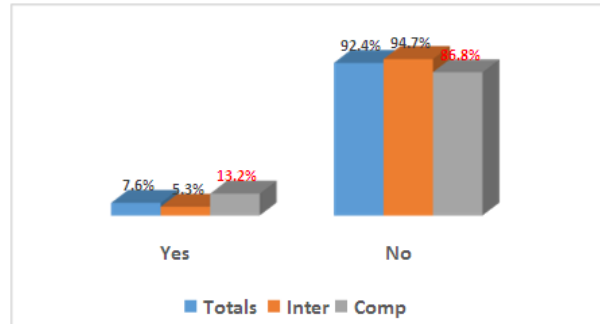


Figure 15: Had sex in the past one year.

The study further picked interest in the sexual practices of pupils who are in a relationship. This was on the basis that the project had invested in providing support to discourage early sexual practices for pupils even when in any form of relationship. Figure 16 below shows that generally 24% of all pupils in a relationship claimed that they have been involved in sexual intercourse with their partner; however, it should be noted that the biggest contributor to this percentage is the section of pupils from the comparison area. This is because when the comparison area data was analyzed alone, it emerged that up to 43.6% of the pupils in a relationship had actually had sexual intercourse. Only 14.6% of the pupils in a relationship in the intervention area are involved in sexual acts. The difference between the intervention and comparison area is a significant 19.6%, which cannot go un-noticed to be accounted to the key implementation message to encourage the pupils to delay sex even when in a relationship.

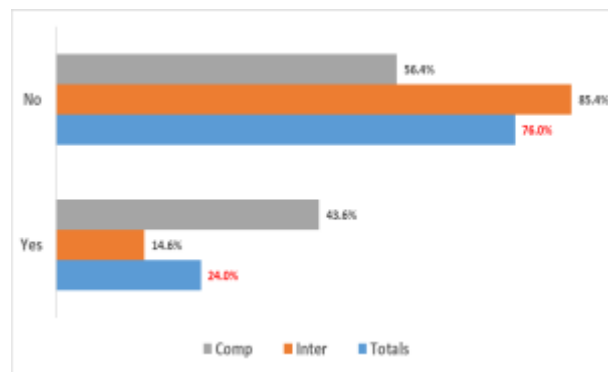


Figure 16: Couples involved in sexual intercourse.

**3.2.3 Pupil Safe sexual behaviour**

The study also focused on whether there was value addition for the pupils to practice safe sex and one of the

points that were considered in this quest was whether the pupils used protection through use of a condom in their most recent sexual encounter. Figure 17 below shows that generally when pupils who had engaged in sexual intercourse were asked whether they used a condom in the most recent sexual encounter, 42.9% claimed that they actually used protection. However, it was surprising to note that the intervention area contribution to this was the lowest with 35.3% compared to the 50.0% geared from the non implementation area. It should be noted that this may be pointing to an intervention that did not yield positive results since the project implemented the condom availability mechanism in strategic youth centres with an assumption that the youth would then have easy access to these for utilisation.

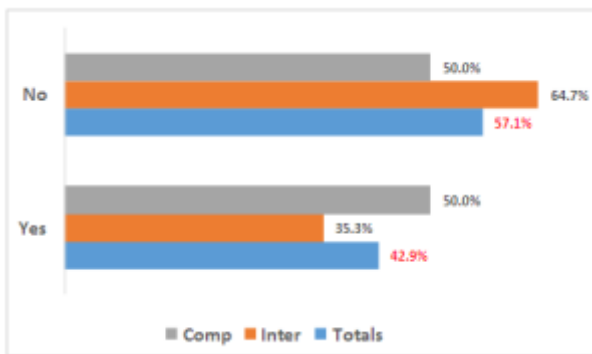


Figure 17: Condom use in the last sexual encounter.

Further analysis focused on the pupils in relationships. The purpose of this focus was because the team thought that when pupils are in a relationship, there is enough time for safe sexual intercourse negotiation and therefore would be in position to prepare the utilization of condoms whenever they are going to engage in sexual activity. Figure 18 below points out that generally only 44.8% of the pupils in a relationship interviewed confirmed the use of a condom in the most recent sexual encounter with their partner. It should be noted that the intervention area also scored low in this indicator with a 33.3% of all pupils in a relationship confirming using a condom in their most recent sexual encounter with their partner. Further still, the comparison area contributed the highest percentage to this cause with over half (52.9%) of the pupils in a relation actually negotiating to use a Condom.

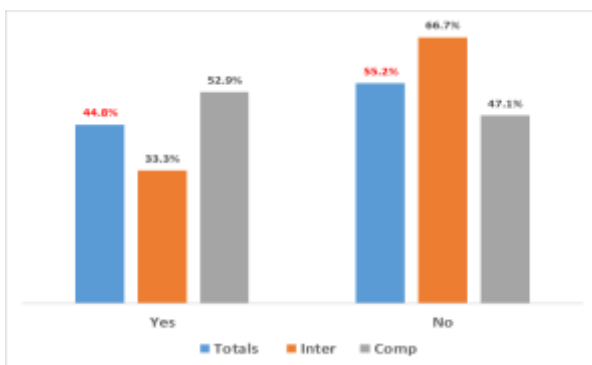


Figure 18: Condom use among couples.

The team also tried to make a connection between sexual engagement and age of the pupils. The team considered pupils who claimed to have had a sexual encounter in the last 12 months with the age of the pupils. Generally 57.1% of the pupils engaging in sexual intercourse are between the age of 16 to 19 years with the other 40.0% being from the 13 to 15 years which is a young cohort to be involving its self in sexual practices. However, the results to portray a celebration for the intervention area since majority (70.6%) of the pupils engaged in sexual practices are in the 16 to 19 years age bracket with only 29.4% being in the lower 13 to 15 years bracket. The results as shown in figure 19 below show that the comparison area had a totally opposite trend with this observation with a 44.4% pupils being in the adult age bracket and upto 50% being in the brack that is discouraged in engaing in sexual activity.

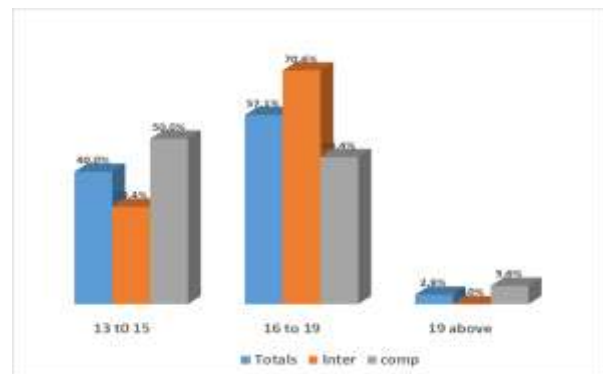


Figure 19: Age at sexual practice.

### 3.2.4 Support in making appropriate sexual choices

The project also performed a comparison focusing on the first preference the pupils would go to when they have sexual related challenges and advise. Generally all pupils prefer going to the Senior Teacher at school, followed by parents with 23.9% and then 23.2% for peers and friends. However, as shown in the Figure 20 below 43.9% of pupils in the intervention area preferred a Senior teacher while only 22.0% of pupils in the comparison area preferred the same. The project celebrates this particular observation since there was a deliberate investment into school Senior teachers to revive their role in being accessible for pupils to consult whenever they need any sexual education and counselling at school.

It should be observed that for the comparison area, pupils preferred going to their peers more than any other choice stated in th study. 32.2% of the pupils preferred going to seek support from peers and friends. This was their highest score, and when compared to the intervention area which had only 19.1% of them preferring friends. This observation could be related to the high early sexual engagements in the comparison area. The project during implementation assumed that when the pupils get support from senior teachers, the chances of delaying sexual practices is high and that is why the project preferred investing in reviving Senior teach engagements with pupils.

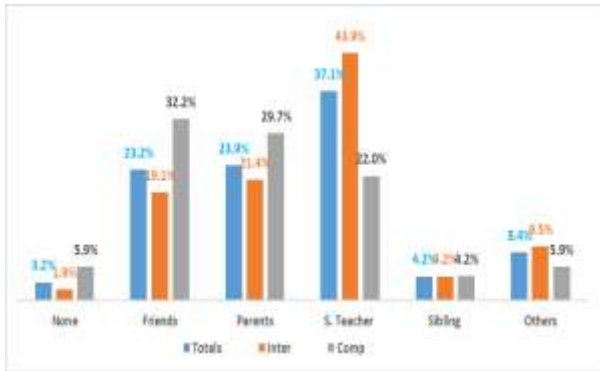


Figure 20: Key first option preference.

The pupils after providing their first choice preference for sexual education and sexual health related issues, were asked to provide a 2<sup>nd</sup> and 3<sup>rd</sup> preferred in case their first choice is not available. The Trend is not any different from the preference for the first choice. Generally the senior teachers were preferred with a 43.7% with the intervention area providing a 50.5% to this choice and the comparison contributing just a 27.1%.

Figure 21 below further shows that parents took the second most important available choice for preference for sex education. Generally contributing 37.2% but with the comparison area providing 41.1% and the intervention area providing 35.6%. Its important to not that the intervention area again made a choice here to search for a mature preference of parents as 2<sup>nd</sup> and 3<sup>rd</sup> preferred choice rather than peers. This therefore means that they are still aiming at getting the right information and hence contributing to the reduction of peer pressure.

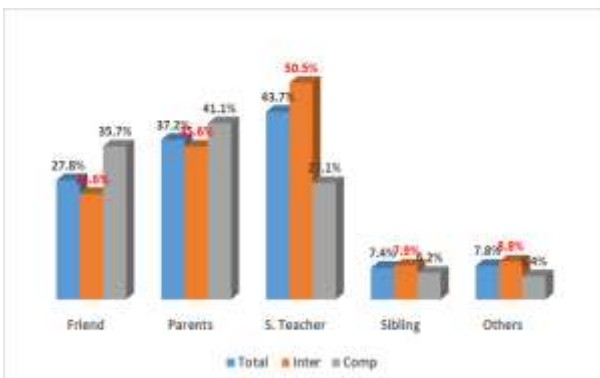


Figure 21: 2<sup>nd</sup> and 3<sup>rd</sup> Preference of sexual education support.

### 3.2.5 Knowledge of adolescents on prevention of early pregnancies

During the project evaluation processes, it was important to ascertain the knowledge and understanding of the myth and misconception around pregnancy. The focus was in the context of teenage and very early pregnancy. Pupils’ knowledge and understanding of the dangers of early pregnancy and what could be the cause of this problem was assessed.

All pupils that were sampled had to provide a response to the question whether they think that teenage pregnancy is preventable. Generally, almost all pupils believed that teenage pregnancy is preventable with a 94.2% score. Noticeably the pupils in the intervention area scored a 94.4% on this scale meanwhile the comparison area scored 85.3%. This provides a 9.1% more pupils in the intervention area who think Teenage pregnancy is preventable than in the comparison area.

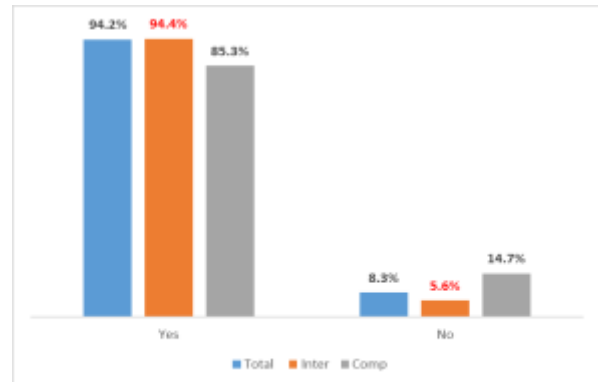


Figure 22: Is early teenage pregnancies preventable?

For the Pupils who agreed with the statement that teenage pregnancy can be preventable, they were further asked whether they have any barrier method that they knew of being used in making sure that teenagers do not end up pregnant. The pupils were supposed to choose from: (a) Pills, (b) Male Condoms, (c) Female condoms, (d) Female sterilization, (e) Intra uterine device, (f) Injectable, (g) Implants, (h) lactation amenorrhea method, (i) Emergency contraception, (j) abstinence, (k) withdrawal method and (l) Folk method (safe days).

Figure 23 below shows that generally 43.5% of all pupils interviewed believe that male condoms are the only sure way of preventing pregnancy, with 20.3% claiming that abstinence would help in prevention of pregnancy and 11.2% preferring the utilization of pills to prevent pregnancy.

However the pupils in the intervention area seem to prefer the utilisation of male condoms to prevent pregnancy in teenagers with 45.6%, this should be noted as the highest percentage scored on this question and would be in line with the fact that the project popularised the male condom for any prevention of pregnancy during sexual intercourse. Further still the intervention area pupils felt that utilisation of safe days would also prevent pregnancy with a 27.7% preferring this as a method of choice. This could be the reason why utilisation of condom in the project area was not as high as expected. It should be noted that safe days if utilised well actually prevent pregnancy but this method does not offer a dual protection from Sexually transmitted diseases and HIV/AIDS.

The comparison area presented a dynamic trend with 38.0% of pupils preferring the utilisation of male

condoms, 25.6% surprising introducing another interesting method of emergency contraceptives and another 21.5% preferring the abstinence principle where the pupils decide to delay sexual intercourse. Even though this group of pupils did not have a high preference for male condom use in pregnancy prevention, a large number of them felt that not engaging in sexual activities would go a long way in preventing pregnancy a key factor that actually reduces the risk to pregnancy and sexually transmitted diseases to a zero.

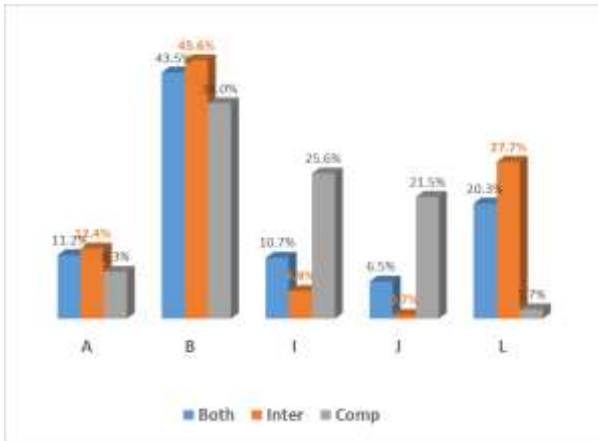


Figure 23: Methods used in pregnancy prevention.

The pupils were further tested on their ability to understand in the female menstrual cycle and if they understood when the girls are most likely to get pregnant. It is important to note that girls are most fertile at the time of ovulation, when an egg is released from her ovaries, which usually occurs 12-14 days before her next period starts. This is the time of the month when she is most likely to get pregnant.<sup>[17]</sup> In the study is timing was labeled as (1) Just before periods and 3 other options were provided including: (2) During menstrual periods, (3) Immediately after menstrual periods and (4) I do not know.

Figure 24 below provides a rather disturbing revelation with only 7% of the pupils actually getting the timing right. The results are even more alarming when you are focusing on the intervention area where only 6.2% of the pupils got the timing right. The Worry with this very low percentage is that from the figure 23 above about 27% of the pupils claimed they would prefer safe days as a choice to engage in sexual activity but prevent pregnancy. This therefore means that the pupils stand a high chance of not knowing their safe days and therefore present a danger of ending up pregnant.

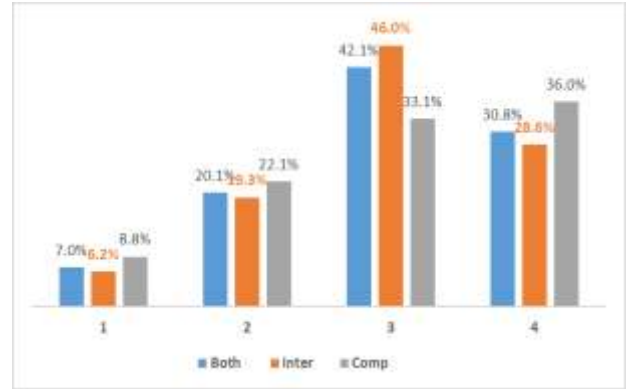


Figure 24: Time of the cycle a girl is likely to get pregnant.

In order to understand whether the pupils have any knowledge and understanding of the actual dangers and probable outcomes of teenage pregnancy, pupils were asked to state as many points as they can explain to the study team. The points required were expected to be with in the following: (1) You can die, (2) Low birth weight baby, (3) Dropping out of school, (4) Premature labor, (5) Anemia. (6) Preeclampsia, (7) Depression and (8) others that could be right.

As shown in Figure 25 below, majority of the pupils knew that if a girl got pregnant, they would drop out of school, with a general 74.0%; the implementation site contributing 70.2% of this and the comparison providing 65.4%. This is the highest score across the board. Further still more than half of the pupils (56.3%) stated that if a pupil ended up pregnant, they would stand a chance of death. This was claimed by 64.3% of the pupils in the intervention area and 37.5% of the pupils in the comparison area.

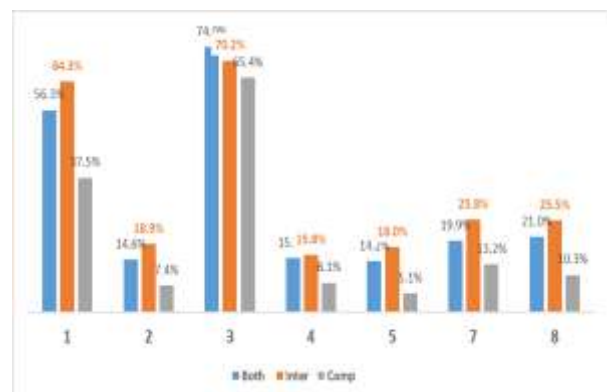


Figure 25: Consequences of early teenage pregnancy.

The team also wanted to ascertain how knowledgeable the pupils were when it comes to understanding the issues related to early teenage pregnancy. The yardstick was set at least a pupil explaining three of the dangers. Figure 26 below show that generally only 29.0% of the pupils could actually mention at least 3 dangers but the celebration in this is that 41.3% of the pupils in the intervention area could actually state at least 3 dangers compared to only 5.9% in the comparison area.

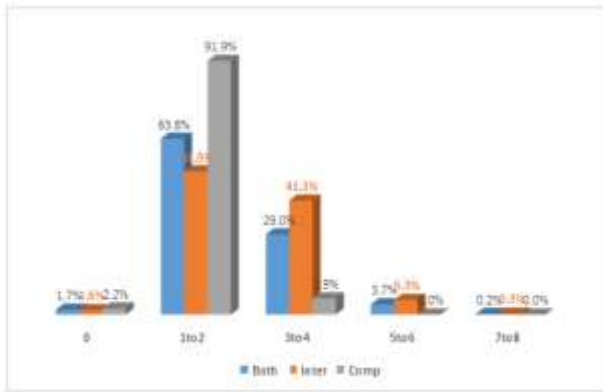


Figure 26: Knowledge levels of Pupils.

The team went ahead to examine the relationship between condom use among adolescents and the findings indicated that condom use was negatively associated ( $p=0.009$ ) with majority of the teenagers that used a condom in the latest sexual encounter being in the comparison area.

Table 1: Relationship between sex education and condom use in the implementation and comparison area.

		Condom use			Total
		NA	Yes	No	
Study area	Intervention area	305	6	11	322
	Comparison area	118	9	9	136
Total		423	15	20	458

#### 4.0 DISCUSSION, RECOMMENDATIONS AND CONCLUSION

##### 4.1 Discussion

Adolescence is a very delicate stage in which various physiological changes occur and majority of the adolescents in schools spend most of their time with teachers in schools. These changes are coupled with a risk of engaging in risky behavior which can result in early pregnancies, dropping out of school and contracting sexually transmitted diseases. Teachers are observed as change agents towards influencing the students' behavior which was one of the reasons for choice as a mode of information delivery and this is in line with other studies.<sup>[18]</sup> The findings from this study are also in line with other studies<sup>[19]</sup> that focused on enlightening teachers and parents to reduce on misconceptions of pupils on sexuality education and thus improve their interactions. This was aimed at improving the perceptions of adolescents towards sexual engagements. The same study also indicates that most teachers lack the necessary information for them to guide their pupils to making better choices in terms of sexual engagements and contraception use.

The changes observed in delay of engagement in sexual activities may be indicative of uptake of positive sexual messages as delivered through the intervention. The effect of increasing adolescent access to sexual and

reproduction information on influencing this delay is in line with other studies like,<sup>[20]</sup> where sexuality education was shown to have influenced delayed adolescent sexual engagement. This can presumably be best delivered when the school authorities learn and own these interventions as was found in another study<sup>[21]</sup> to ensure sustainability even after support project closure. The increase in the use of condoms in this study by the end line is in line with other studies like<sup>[22]</sup> where more students' intention to use condoms increased with the provision of information on condoms however does not necessarily increase sexual behavior. The utilization of teachers and health professionals in influencing sexual behavioral change in a school environment is also noted as a key entry point. A similar study<sup>[23]</sup> in Uganda that sought to assess the Increased sexual abstinence among in-school adolescents as a result of school health education in Soroti district also found out that adolescents tended to speak to their peers and teachers after the intervention which is line with the findings in this study.

The Ugandan School curriculum for science does include sensitive topics about how to handle adolescence and these topics are actually taught to pupils in the age categories between 12 to 18 years as long as they are in the primary school. The only challenge has been differentiating between teaching a lesson and supporting a teenager in the pupils' class to make a health and appropriate sexually related choice. For pupils to be able to make the appropriate choice about sexual activity and intercourse, they need to be talked to about sex and sexuality, they discussion is supposed to offer them all the options available for safe sexual behaviours but also about the dangers of early unprotected sexual acts.

The results from this study indicate that sexual education campaigns can contribute to improvement in sexual behavior of adolescents which is line with other studies.<sup>[23]</sup> For the pupils to be able to access the support in terms of messaging and counselling, this study provides evidence that there is need to have a deliberate effort to station counselling providers in school and youth centers since the pupils are in that stage of exploring and asking questions about their sexuality. The project used school placards with key messages that promote appropriate sexual behaviours and discourage those that are not appropriate for the age category. The messaging went a long way to contribute to the reduction of poor sexual behaviours but also contributed to the knowledge and skills of the pupils as far as sexual education is concerned. Comprehensive sexual education campaigns as was done in this intervention have also been shown in other studies<sup>[24]</sup> to have an effect on reduction of teenage pregnancies unlike abstinence only campaigns. Interventions should target all aspects of adolescent sexual reproductive messaging.

One key factor in this project was the revival of the role that is supposed to be played by the senior woman and

man in the primary schools. The assumption that the project worked on was that the senior teachers are accessible to the pupils and therefore would offer a two-way traffic for pupils in support and counselling on sexual behaviours. The project as seen in the result found out that the use of peers and other non-formal structures to support the pupils on sexuality would in most cases offer the wrong guidance to pupils as it was in the case for the comparison area where most pupils asked their peers. This accelerated peer pressure and led to a high early sexual intercourse rate in the comparison sites. This therefore means that using teachers for the in school teenagers is a sure way of helping the youth make appropriate sexual choices and even contribute to delayed pregnancy among the teenagers. The observed preference of the peers to share sexual talks with their fellow peers at the baseline does not come as a surprise as this is in line with previous studies.<sup>[25]</sup> This usually comes about because of the time the adolescents tend to spend with their peers and thus developing a form of confidence to express the challenges they may be going through. The same study further highlights challenges that may result from adolescent sexual relationships including violence, pregnancy and sexual oppression which is line with the adolescent response results for this study.

The notion that availability and utilization of reproductive health commodities in this study was implemented with the assumption that making some of these commodities available to pupils would improve on their use. The Ugandan education system does not permit availability of these commodities in school premises. However, the same government of Uganda has an implementation policy for Youth Friendly services at Health centers and designated youth centers in the country. The Youth Friendly services at the Health centers and the youth centers were collaborators in this venture of making sure reproductive Health commodities are readily available in designed sites in the community. However, as seen in the results, not very many pupils who were involved in sexual intercourse did actually use a condom or even bothered to implement any pregnancy prevention method. This therefore means that there are still barriers that need to be explored to ensure these commodities are complimenting the counselling done by Teachers. Much as interventions in this study are in line with recommendations from other studies,<sup>[26,27]</sup> effectiveness is best achieved with a continuum of mixed activities that include demonstrating condom use to adolescents, use of mass media, reducing the barriers of condom use and improving adolescent communication skills to enhance condom use. The study focused on ensuring that if any pupil after getting as much support as possible about the appropriate sexual behaviours decides to engage into sexual acts, would then at least use a condom. The Dual protection mechanism was the most suggestive assumption. This was because the rates of teenage pregnancy in Uganda need to be drastically reduced but also contribute to the prevention of Sexually

transmitted diseases and HIV/AIDS which further stamps the high levels of teenage pregnancies as observed in the demographic health survey.<sup>[28]</sup> However, the findings give a celebration but they also identify key barriers to fully achieve this goal.

The Ministry of education needs to accelerate the inclusiveness of a deliberate sexual education and counselling support in schools routine work. Senior Woman and man teachers are already appointed but they lack the capacity and tools to facilitate their availability for pupils support. The Ugandan government should focus on the discussion to include reproductive health commodities in the school sexual and sexuality package.

#### 4.2 Recommendation

1. **Commodity and information availability:** Evidence from the study clearly show that the sexual and reproductive health support of the pupils needs to be holistic. It should be a one-stop shop where both the information and commodities are availed at the same time through barrier elimination at all costs. This is simply because, when reproductive health commodities are being made available by a different government entity, the situation somehow creates a barrier for the teenagers.
2. **Capacity building of Senior Teachers:** From time memorial, it has been the norm for a Ugandan Primary school to have a Senior Woman and a Senior Man. These are specifically assigned by the school management to handle the sensitive issues around sexual talks and sexuality including the menstrual Hygiene for girls. However, this key cadre are not adequately trained, monitored and not even supervised. Capacity support to this cadre in schools shall go a long way in making sure they actually become readily available for the pupils, through a 2-way traffic.
3. **Utilization of Youth Structures is Key:** The project noticed a missed opportunity when it came to the linkages between the pupils and the youth clubs that are for children generally. Schools that have a focus on supporting adolescent reproductive Health need to target these youth groups. The Project focused on referral to youth groups but the pupils did not pick this up that easily and that is why the rate of reproductive Health commodities did not improve at all since this looked like a barrier for the pupils. It should be the youth groups in the community looking out for the pupils just like the senior teachers did.
4. **Acceleration of national Level Advocacy for sexual and sexuality implementation in Schools:** The Ministry of Health, Ministry of Education and Sports, Ministry of Gender and Social development should fast track the policy implementation framework for reproductive health in schools. The Ugandan situation has a number of actors who are for and a number that are against. Consensus needs to be reached, however this needs to be reached with

solid evidence about the actual reality on the ground and it should be for the good of the pupils.

5. **District replication of interventions somewhere else:** The Kitgum District Local government needs to pick the learnings from this one-year intervention and strategize to replicate the interventions in the remaining sub counties in the District. Focus should be on the pieces that worked well since they would project a good picture for the District government. The District could approach donors who have interest in Teenage Reproductive Health.

#### 4.3 Conclusion

Addressing adolescent sexual and reproductive needs presents an opportunity to overcoming a continuum of health challenges that may affect them presently or even affect their adulthood. Implementation of pupils' reproductive Health interventions needs a multipronged approach strengthening the linkages between the youth clubs, the school administration and the Health Centers. The implementation rotates around the availability and utilization of reproductive Health information support and commodities. Pupils in the age categories are prone to peer pressure so if the right person does not offer the appropriate support in the required time, the pupils will end up making inadequate choices with their sexual health. The Multipronged approach requires the support from the District leadership both technically and politically. The District Education office, Health and gender need to strengthen partnership for this to yield positive results.

These results may not be generalizable to all adolescents including those out of schools, different geographical location and social-cultural characteristics in other regions of Uganda however, specific sexual reproductive public health interventions that are gender sensitive can be formulated to address the needs of adolescents in such settings. It is therefore also important for other studies to be carried to illustrate how other factors that were not assessed for by this study may influence adolescent sexual behavior. Some of these may be social, cultural, peer rated and the increased use of technology among adolescents.

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