

Survey on
Knowledge, Attitude and Practise (KAP) of Adolescents

**with regard to Reproductive Health and Sexually
Transmitted Infections, including HIV/AIDS**

in Lindi Region

February 2000

**Commisioned by:
Reproductive Health Project/ GTZ**

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¹ For a complete list of all head teachers visited, see appendix 5.

Abbreviations

DED	District Executive Officer
DEO	District Education Officer
DHO	District Health Officer
FP	Family Planning
GAD	Gender and Development
GTZ	German Agency for Technical Collaboration
HP	Health Policy
KAP	Knowledge, Attitude and Practise
MCH	Maternal and Child Health
MOEC	Ministry of Education and Culture
MOH	Ministry of Health
PHC	Primary Health Care
RAS	Regional Administrative Secretary
REO	Regional Education Officer
RH	Reproductive Health
STI	Sexually transmitted disease
TTC	Teachers' Training College
WID	Women In Development

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Executive Summary

In November 1999 a survey has been conducted in four districts of Lindi Region, in order to assess the Knowledge, Attitude and Practice of adolescents with regard to Reproductive Health and Sexually Transmitted Infections (STIs), including HIV/AIDS. A total of 1560 Standard VI students in 48 schools have been included in the survey. Among those 903 were girls and 657 were boys. The mean age of students in the sample was 14.8 years, girls on average being slightly younger than boys. The age range between the younger and older students was 7 years.

84% of students had already passed initiation rites, and 50% of students report to have reached physical maturity (menarche for girls, wet dreams for boys). An average of 45% of all students interviewed are already sexually active. Among girls 30% report to have had sexual intercourse, while among boys 65% indicate that they are sexually active.

The age at which students start to practise sexual intercourse is quite low. Boys start at a mean age of 11.2 years, whereas girls mean age at first sexual intercourse is 14.0 years. In general, adolescents become more and more sexually active after having reached 12 years. The majority of boys has first sexual experience before physical maturity. In group discussion they explained that early and regular sex are needed to grow properly. For boys, the fact that they can have an erection is a sufficient precondition for first attempts of penetration. It seems that among boys, child-like games involving the discovery of one's own sexuality gradually develop into mature sexual intercourse, without a marked border of entering adulthood. Within this continuous process, the concept of first sex as being an important milestone in a person's individual development does not seem to fit.

28% of the girls who already had sex, were forced to do so, when they had their first sex. Most probably, many more have been forced in subsequent sexual encounters. Young people tend to have several partners. Boys more often have several sexual partners in life than girls do. Only 15% of sexually active boys have had one single partner, while 85% have had several partners. Among the girls, 48% had one partner so far, while 52% had several lovers, even up to more than ten.

Only 16% of all students in the survey know that the first sexual intercourse can possibly lead to pregnancy of the girl. Similarly, only 30% of girls and 53% of boys know that a healthy looking sexual partner can possibly carry the HI-Virus and subsequently infect them with the deadly disease. Although 51% of students know that condoms are a functional means of contraception and 61% know that condoms also prevent HIV infection, only 18% of all students report to have ever used a condom during sexual intercourse.

On the basis of information gathered during the survey we can conclude that the children and adolescents of Lindi Region are at risk, not only with regard to early pregnancy, but also with regard to STIs and especially HIV/AIDS. 22% of all girls are at risk of getting pregnant at an early age, as they are sexually active after having reached physical maturity. All sexually active girls, i.e. 30% of girls involved in the survey are prone to be infected with a STI, including HIV/AIDS. Those sexually active boys who are physically mature, i.e. 40% of those involved in the survey are at risk of impregnating their sexual partners, most of which are adolescents and school girls. All sexually active boys, i.e. 65% of boys included in the survey are prone to be infected with a STI, including HIV/AIDS.

The partial ignorance of the young people in Lindi region, coupled with the reality of themselves being sexually active bear dangers. Not only the lives of those adolescents are potentially threatened, but also a high social cost can result from the "mixture of not knowing but doing". Girls are prone to become pregnant at an early age, which hinders them from continuing their education and put a health hazard on them (complications during labour due to small pelvis, fistulae, and in the worst case infertility or death). The adolescents, both boys and girls are exposed to STIs (including HIV/AIDS) which increases medical costs in the household budget if treated and potentially leads to infertility if not treated. Last, but not least, the adolescents can potentially become infected with HIV/AIDS.

This chain of arguments is more than enough for pleading for action. The adolescents should no longer be forced to acquire their sexual and reproductive health knowledge on the basis of "trial and error". Special attention needs to be paid to male education, as their common behavioural pattern bears a lot of risk for themselves and peer pressure of having sex is strong. Providing the young people with information is a positive contribution to promoting their human rights and an adequate tool for assuring that they can grow up safely.

1. Background Information about the Study

1.1 *REPRO & Rationale for the Study*

As its name suggests, REPRO/GTZ is a German funded project focusing on reproductive health in Tanzania. The project goal is to improve the access of relevant target groups to adequate quality services of reproductive health (RH), as well as to improve the personal and social reproductive behaviour, especially with regard to family planning (FP), maternal health care and the prevention/ control of sexually transmitted infections (STIs), including HIV/AIDS.

This goal is to be achieved by the following objectives:

1. Support the promotion and propagation of the existing RH-strategy
2. Offer an integrated and qualitatively adequate package of services (FP, safe motherhood, STIs, HIV/AIDS)
3. Facilitate community based initiatives and services for RH
4. Development of adequate methods to reach young people inside and outside of schools with information and services of reproductive health

The study in Lindi was initiated within the framework of the fourth objective. The aim was to establish a set of baseline data on adolescents' knowledge, attitude and practise (KAP) with regard to reproductive health and STIs (including HIV/AIDS).

1.2 *Terms of Reference*

The Terms of Reference included the planning and implementation a quantitative survey on Knowledge, Attitude and Practice (KAP) of standard VI students, based on a questionnaire designed in collaboration with responsible staff of REPRO/GTZ². Parallel to the KAP study a second method was used (the so-called Paper Slip Method), in order to assess the situation and in order to assure validity of data.

1.3 *Lindi Region*

Lindi region is located in the southern coastal area of Tanzania, bordering with Pwani region in the north with Morogoro region in the west and with Ruvuma and Mtwara regions in the south. It is divided into six administrative districts, namely Lindi urban, Lindi rural, Ruangwa, Nachingwea, Kilwa and Liwale³. In Liwale and partly Kilwa, large proportions are part of the Selous Game Reserve. There is a total of 28 divisions, 114 wards and 358 villages registered in Lindi region. Lindi region is quite isolated from the rest of Tanzania due to a lack of adequate transport infrastructure, especially during the rainy season (December to May).

The total size of Lindi region is 69,334 km², with a population of roughly 800,000 people (estimate 1998). The majority of households are subsistence farmers, and the most prevalent crops are maize, millet, manioc and rice. The main cash crops are cashew nuts, as well as sesame, coconut, sisal and groundnuts. The estimated annual income per capita is below national average. Besides agriculture, fisheries is an important source of income.

With regard to health facilities, Lindi region is equipped with 8 hospitals, 13 health centres and 114 dispensaries, most of which are governmental structures. Compared to the national average, the region's health indicators present a disfavoured situation of the region. The population-physician ratio, as well as the population-dispensary ratio is below national average, whereas infant, under five and maternal mortality are above national average.

² For Terms of Reference, appendix 1.

³ Liwale and Kilwa districts have not been included into the baseline survey for logistical reasons.

There are 339 registered primary schools in the district (1996), with approximately 87,000 students enrolled. It is reported that the educational system faces serious challenges, due to failed staff recruitment, late school enrolment, as well as high drop-out rates.

With regard to reproductive health, adolescent sexuality and STIs the situation is as follows. The southern regions of Tanzania (including Lindi) have a higher rate of teenage pregnancies and motherhood than the national average. Although knowledge about selected modern means of contraception (e.g. condoms) is high in Lindi region, the current use of modern contraceptives among men is below average. Among women, contraceptives are used to a larger extent than they are used at national level. The level of knowledge about STIs is above national average, both for men and women. The same applies for the rate of self-reported STIs among men, while women's self-reporting is roughly at national average. With regard to means of preventing a HIV/AIDS infection, the percentage of those who know about the potential use of condoms (both men and women) is higher than the national average⁴.

⁴ See Bureau of Statistics/Planning Commission "Demographic and Health Survey" 1996.

2. Policy and Legal Background

2.1 *The third Medium Term Plan for AIDS Control*

The third medium term plan for AIDS control is a strategic plan, which was formulated with the assistance of UNAIDS. It was developed through a participatory approach. Determinants of the epidemic were identified, ranked and strategies to address them formulated and judged for feasibility. The plans covers several sectors and interventions include STI control, maintenance of safe blood transfusions, the strengthening of the position of the women, the promotion of safer sex among commercial sex workers, highly mobile populations and me with multiple sexual partners. Further it includes interventions among the youth and aims at improving educational opportunities of girls as well as the "reduction of poverty leading to sexual survival strategies". (Ministry of Health, 1998)

2.2 *Family Planning Service Delivery*

Section I (Art. 3-7) of the national policy guidelines and standards for family planning service delivery and training (MOH, revised edition 1994) contains crucial information about the eligibility for FP-services and the delivery procedures:

"All males and females of reproductive age, including adolescents irrespective of their parity and marital status, shall have the right of access to family planning information, education and services. Any woman or man shall be provided with a family planning method of her/his own choice after appropriate and adequate counselling without requiring the consent of the spouse. Adolescents shall be provided with information, education and counselling on family planning. Sexually active adolescents who seek family planning services shall be counselled and provided with family planning methods that are appropriate to them."

"Family planning information and services will be provided through Government, non-government and private health facilities, including Maternal and Child Health (MCH) and family planning clinic (urban and rural), and through community based and commercial social marketing programme outlets."

Up to now, it is common practice and understanding, that those eligible for family planning are women, who have already been childbearing. However, according to policy guidelines the range of clients welcomed for family planning is much broader, thereby including all persons in reproductive age, i.e. also young people and men. The present-day interpretation and implementation of the government policy (i.e. focusing on childbearing women only) has consequences for adolescents. They are less likely to be able to protect themselves well against early pregnancy, as well as STIs (including HIV/AIDS).

2.3 *Law of Education (1978)*

Based on the Law of Education of 1978 the Ministry of Education and Culture (MOEC) formulated a series of regulations, one of which deals with the expulsion of pregnant girls from school. Reasons for expulsion explicitly mentioned are the following ones⁵:

- (a) the persistent and deliberate misbehaviour of the pupil is such to endanger the general discipline or the good name of the school*
- (c) the physical or mental health of the pupil is such as to make it undesirable for him to remain or continue at school."*

There is no explicit statement, that pregnant school girls have to be expelled from school. However, it seems to be an issue of common understanding and consent that pregnant school girls "endanger the general discipline or the good name of the school" or that their "physical health makes it undesirable for them to continue school".

⁵ Quote from the National Regulation on expulsion and exclusion of pupils form school (1979), Section 69(4, 7 and 10).

3. Methodology

3.1 *Parallel use of Different Methodologies*

Parallel to the study on Knowledge, Attitude and Practise (KAP) based on a specifically designed questionnaire⁶, a second method was applied to assess the KAP of Standard VI students with regard to reproductive health and STIs, namely the "Paper Slip Method"⁷ (PSM). This was done with the double intention of firstly testing the applicability of the method in the Tanzanian environment and secondly of validating the data gathered in the quantitative KAP study.

For the PSM, girls and boys were asked in separate sessions to respond to a sub-selection of the questions from the initial questionnaire by writing their answer on a small piece of paper. These were then collected in a ballot box and the results were presented to the group. In a subsequent stage the results of the PSM were compared to the results of the questionnaire KAP. The insights gained are documented in a separate report by Ms. R.L. Mwateba.

3.2 *Schedule of the Survey*

The **first phase** of preparations for the survey took place in Dar es Salaam, where the following steps were accomplished:

- Definition of sample size: The goal was to cover roughly 20% of registered Standard VI students. The male-female ratio was not included as a criterion. Based on the number of students to be included, it was decided on the number of schools to be visited⁸.
- Design of a timeframe for the study (taking into account the timing of school activities, number of schools to be visited, availability of transport and facilitators, etc.)
- Design of a separate questionnaire⁹ for boys and girls.
- Preparation of material (pens for students, information files for head teachers, letters of introduction, printing of questionnaire for students and enlargements for presentation, rope, scissors, masking tape, photocopy paper, etc.)
- Contact Teachers' Training College in Nachingwea for the recruitment of potential research assistants.
- Preparation of the Training Workshop for the research assistants

The **second phase** of preparations took place in Lindi between the 13th and 15th November and included the following steps:

- Carrying out of the training workshop for the research assistants and selection of half of the workshop participants for the survey activities.
- Contacting regional and district authorities, in order to obtain permission and facilitation for the survey.
- Final decision-making on the schools to be visited and the logistical necessities

⁶ For questionnaires, see appendices 6, 8 and 9.

⁷ For further reference on the method, see "Listening to Young Voices: Facilitating, Participatory Appraisals on Reproductive Health with Adolescents" pp.61ff.

⁸ For a list of schools visited, refer to appendix 4.

⁹ See appendices 6, 8 & 9 for English and Kiswahili versions of the questionnaire.

During the **implementation phase** (16th-30th November) the team visited 48 primary schools, in order to meet with a sufficient number of students. The planning on the schools to be visited on a particular day was done in an iterative process, taking into account changing circumstances. Periodic feedback and refresher sessions were conducted with the research assistants. After each day, the questionnaires were filed and numbered.

A format was created in Epi Info6 software for entry and subsequent analysis of the data gathered. The data was entered by a data entry clerk during December and early January, allowing the analysis, as well as report writing to take place in January and early February.

4. KAP Findings Part I: Background information, Knowledge and Practice

4.1 The Sample

During the survey the Standard VI students of 48 schools within four districts of Lindi Region were visited. The selection of schools was based on lists provided by the Regional Education Office, indicating the number of students. For Lindi urban and rural the figures represented the actual number, whereas in Nachingwea and Ruangwa the intake figures of pupils in the beginning of the school year were indicated. The selection criteria for the schools were the following ones:

- For Lindi urban and Lindi rural: no class below 20 students and at least 10 boys and girls each. The expected mean number of students per school was 55 for Lindi urban and 37 for Lindi rural.
- For Nachingwea and Ruangwa: at least 20 girls and boys each per school. The expected mean number of students per school was 68 for Nachingwea and 56 for Ruangwa.

The aim was to have between 1500 and 2000 questionnaires filled, in order to get hold of a sufficiently representative sample by including roughly 20% of all Standard VI students registered. In addition, the minimal sample size was calculated on the basis of estimating prevalence rates and establishing the tolerated sampling error.

Table 1: The Sample¹⁰

	Number of schools	Boys		Girls		Total	
		expected	actual	expected	actual	expected	actual
Lindi Urban	9	213	188	267	229	498	417
Lindi Rural	12	212	125	249	187	461	312
Ruangwa	6	155	71	165	104	317	175
Nachingwea	21	614	276	653	384	1267	660
Total	48	1212	660	1331	904	2543	1564

It was expected to meet with an almost equal numbers of boys and girls, namely 1212 boys vs. 1331 girls or 47.7% boys vs. 52.3% girls. But during the survey activities the difference between the expected and the actual number of children encountered was much larger for boys than for girls. For the final sample 904 girls' questionnaires of and 660 boys' questionnaires were collected, that is 42.2% boys and 57.8% girls. The survey team encountered 15% fewer students than expected in Lindi urban, 32% fewer than expected in Lindi rural, 45% fewer than expected in Ruangwa and 48% fewer than expected in Nachingwea.

The loss of an average of 38.5% of students is very high and reasons for it are manifold. Firstly, some of the lists indicated the number of students in the beginning of the year (instead of actual figures). Secondly, normal teaching routine was interrupted by end-of-school-year celebrations (or preparations for such activities), by preparations for the announced visit of President Mkapa, preparations for Standard IV exams, burials, visits to the mosque, teachers' seminars and farm work.

The average number of children encountered per school was 46 children per school in Lindi urban, 28 children per school in Lindi rural, 29 children per school in Ruangwa and 31 children per school in Nachingwea.

¹⁰ For more detailed information about the sample of schools and the respective number of students encountered, see appendix 3.

Out of 1564 collected questionnaires, 1560 could be successfully entered into the data analysis software (Epi Info6), which equals a very acceptable failure rate of 0.3%. Within the final sample 27% of students origin from Lindi urban, 20% from Lindi rural, 11% Ruangwa and 42% from Nachingwea.

The actual coverage is 18% of all Standard VI students registered in the four districts (1560 out of 8546 registered students).

4.2 General Information on Pupils Involved in the Study

4.2.1 Age of Students Involved

Roughly 85% of students included in the survey is aged between 13 and 16, both for boys and girls. Approximately 55% of all students belong to the age group 14 and 15, while 15% each are 13 or 16 years old. Girls tend on average to be slightly younger than boys. While 53.1% of girls are below age 15, only 40.8% of boys belong to this age group.

The mean age of students in the sample is 14.8 years (girls 14.6 and boys 15.0 years). The mean age of students in the different districts is 14.2 years in Lindi urban, 15.1 years in Lindi rural, 14.7 years in Ruangwa and 14.9 years in Nachingwea.

Table 2: Age of students

Age	Girls		Boys		Total	
	Number	%	Number	%	Number	%
10	0	0	1	0.2	1	0.1
11	2	0.2	2	0.3	4	0.3
12	29	3.2	13	2.0	51	3.3
13	165	18.3	76	11.6	241	15.4
14	283	31.4	175	26.7	458	29.2
15	217	24.1	177	27.0	394	25.2
16	113	12.6	117	17.7	230	14.7
17	57	6.3	54	8.2	111	7.1
18	26	2.9	28	4.3	54	3.4
19	6	0.7	9	1.4	15	1.0
20 and older	3	0.3	4	0.6	7	0.4
Total	901	100.0	656	100.0	1556	100.0

If students started school at age 7, as it is foreseen, they should be 12 or 13 years by the time they reach Standard VI. Table 2 shows that approximately 85% of students are older than that.

It is crucial to recognise that the age range of students is quite vast. The age gap of seven years in one class is enormously big. This fact has major implications with regard to the planning and implementation of a school-based information or advocacy programme in sexual and reproductive health.

4.2.2 Religion

Roughly two thirds of students involved in the survey are Muslims (66.3%), followed by a reasonably strong representation of Catholics (23.8%). The Tanzanian national average with regard to representation of different religious denominations is 22% Catholics, 22% Protestants, 38% Muslims and 18% traditional religions. It is a well-known phenomenon that Muslims form a strong majority in coastal regions, which historically were exposed to Muslim traders from the orient.

Within the region, Christian denominations (Catholic and Protestant) have higher than average representation in Nachingwea (31.0% regionally vs. 41.6% in Nachingwea). On the other hand, Lindi rural (75.9%), Lindi urban (74.8%) and Ruangwa (73.0%) show higher percentages of Muslims than the regional average (66.3%).

As expected, there are no significant differences with regard to religious affiliation between boys and girls, because they belong to the same sample of families.

With regard to sexual behaviour (onset of sexual activities and condom use) there are no significant differences between the children of different denominations. Therefore, data on religious affiliation shall simply provide background information about the sample to be kept in mind when designing a potential intervention strategy.

4.2.3 Tribal Affiliation

Table 3: Tribal affiliation of students

	Total	
	Number	%
Myao	165	10.6
Mmwera	597	38.3
Mmakonde	362	23.2
Mmakua	175	11.2
Others	259	16.6
Total	1558	100.0

The most predominant tribes are the Wamwera and the Wamakonde, which together account for 61.5% of all students interviewed. The Wamwera are considered to be the "original inhabitants" of the area, whereas the Wamakonde are seen as being immigrants from neighbouring Mtwara. Both the Wamwera, as well as the Wamakonde are matrilineal tribes. As for religious affiliation, there is no significant difference to be expected between the girls and the boys.

When looking at the regional distribution of tribal affiliation, it becomes apparent that the Wamwera have their stronghold in Ruangwa (81.1% vs. 38.8% regionally). The Wamakonde are strongly represented in Lindi rural (31.4% vs. 23.2% regionally). Wamakua have a higher representation than average in Nachingwea (16.3% vs. 11.2% regionally). Finally, the category of "others" is most prevalent in Lindi urban (30.4% vs. 16.6% regionally), which is quite common for the regional administrative capitals in Tanzania.

4.2.4 Family Set-up

An average of 61.8% of children involved in the survey live with both parents. 19.4% live with their mother only, while only 5.1% live with their father. It was not within the aim and design of the survey to investigate about the reasons for single parenthood. Therefore no statements can be made as to whether the cases of single parenthood are caused by social rupture or by the death of one partner, eventually related to HIV/AIDS.

Table 4: Answer to question "Whom do you live with?"

	Total	
	Number	%
Both parents	962	61.8
Only my mother	302	19.4
Only my father	79	5.1
Relatives	57	3.7
Others	156	10.0
Total	1556	100.0

The family set-up does not correlate with knowledge about the possibility of getting pregnant at first sex or being infected with HIV/AIDS by a healthy looking person. It also does not correlate with the sexual behaviour of the children. For all family constellations the percentage of those who are already sexually active (boys and girls) is very similar.

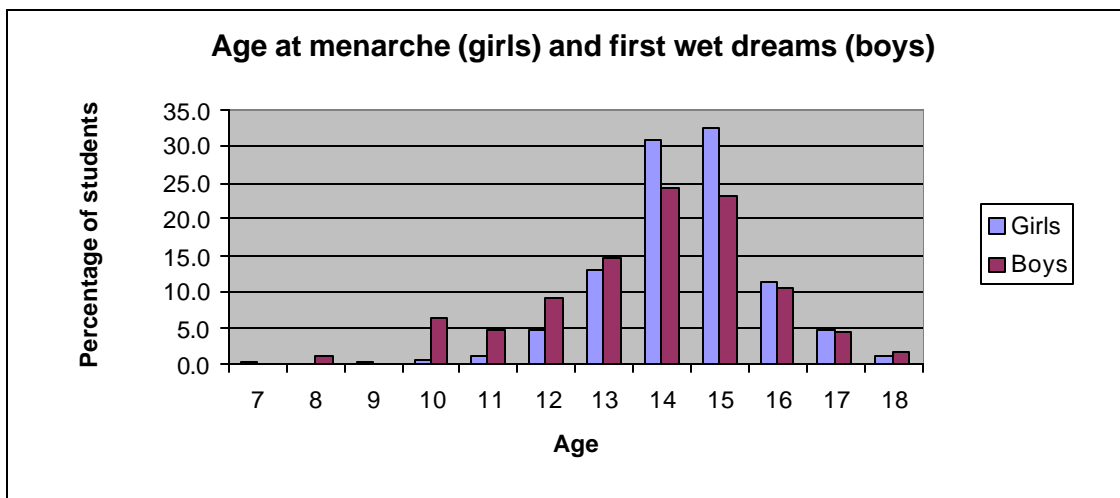
4.2.5 Age of Maturing

For this study, the onset of menstruation among girls and the onset of wet dreams were taken as indicators for biological maturity of the students.

Among girls, as well as among boys roughly 50% of those included in the survey have not yet physically matured. Among girls the incidence of menarche is continuously increasing with age and culminating at 14/15 years. The boys show a similar pattern, however, although they report earlier onset of maturing, the culmination point of getting wet dreams for the first time is at the same age as menarche among girls.

The mean age for girls having their first menstruation is 14.4 years, while for boys the mean age of getting wet dreams for the first time is 13.6 years. The median is for both girls and boys 14 years of age.

Graph 1: Age at menarche (girls) and first wet dreams (boys)



4.2.6 Initiation Rites¹¹

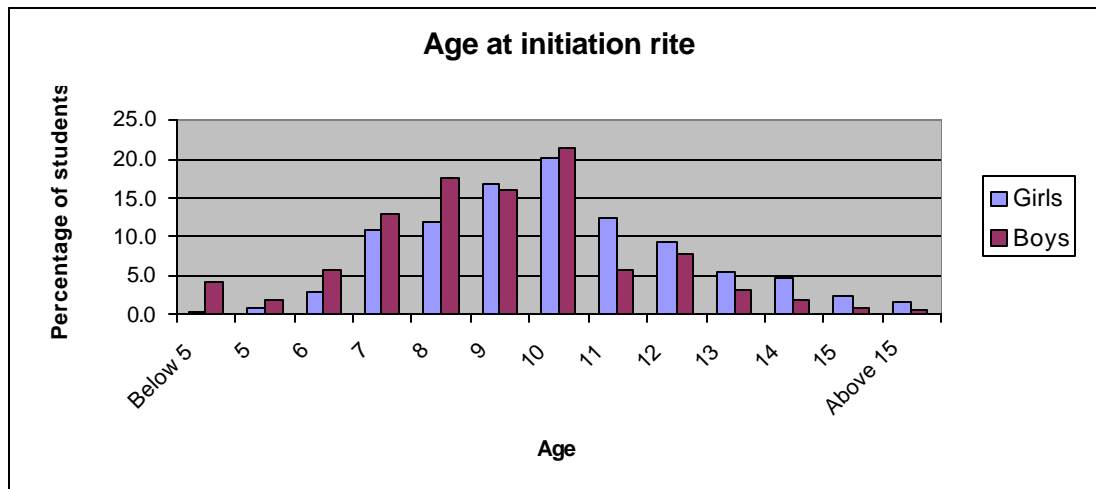
Among the prevalent tribes there are different types of initiation rites. Historically, boys' initiation rites include circumcision (usually at an early stage), followed by initiation at maturing. Girls' initiation is not linked to the practise of circumcision, however, there are still several types of initiation. One was traditionally performed at the time of the girls' physical maturing, another one when the first pregnancy and childbirth takes place.

In the past decades, these traditional practices have undergone major change. It has become more prevalent to perform male circumcision at the local hospitals, religious institutions (especially Catholics) have partly taken over the responsibility for initiation rites and initiation is generally performed at a younger age. The pulling forward of initiation is due to several reasons, such as financial constraints and government regulations.

¹¹ For more detailed information about initiation rites, see separate report on Paper Slip Method by R.L. Mwateba.

During the survey the focus of investigation was on the initiation rite at the time of physical maturing (i.e. not necessarily linked to circumcision). Among girls 17.3% and among boys 14.3% report to not having passed initiation rites yet, while the remaining 1307 students gave indications about the age of undergoing initiation. Although this was well explained by the research assistants, some of the boys still seem to have mixed up by indicating their age at circumcision. It could be that boys of tribes, which do not practise social initiation were confused, when discussions about different types of initiation were held. Among the students involved, 27.0% of girls undergo initiation below age 9, whereas the percentage for boys in the same age group is 42.4%.

Graph 2: Age of girls and boys at initiation rite



The culmination point with regard to initiation of all students involved lies between age 7 and 10. A total of 63.4% indicate to have undergone initiation within this age span. The difference between boys and girls is only a slight one, where most of girls undergo initiation between age 8 and 11, while most of boys do so between age 7 and 10.

Girls' and boys' age at initiation rites vary between the different tribes. It seems that the Wamwera tend to perform initiation earlier than average, for girls as well as for boys. The mean of all girls is at 10.0 years, whereas among the Wamwera it is at 9.1 years. The mean of all boys is at 9.0 years, whereas among the Wamwera it is at 8.7 years.

Among girls, all tribes other than the Wamwera perform initiation rites at a later stage than the average of the entire sample. Compared to average, girls in "other tribes" undergo initiation at a later stage (mean 11.6 vs. 10.0 years in average). Among boys, the Wamyao, the Wamakonde and the Wamakua perform initiation later than average, while the category of "others" reports early performance of initiation rites. The low age of initiation among the category of "others" could be caused by boys referring to circumcision, rather than to social initiation rites accompanying the physical maturing of boys (social initiation might not be common in "other" tribes).

Among those who have not yet passed initiation, the category of "others" is very strongly represented among girls (49.4%). This may be an indication that many of those tribes do not practise the custom. Among boys the percentage of "others" is also high, but not as outstanding as among girls. This may be an indication that most of the "other tribes" do perform male circumcision, however, not social initiation rites.

A clear tendency becomes apparent when comparing the age of girls at menarche and the age at initiation rites. Most of the girls undergo initiation before menarche (708 girls or 79.0%)

and only 1.2% (11 girls) have had their menstruation before undergoing initiation. With regard to those who have not yet passed initiation rites, but already experience menstruation (55 girls or 6.1%) the situation is unclear, because it is not known whether initiation will still be performed onto them or not¹². For those who have neither undergone initiation nor passed menarche (98 girls or 10.9%), both options are still possible.

Looking at the correlation between sexual maturity and the timing of initiation rites for boys, one can discern that almost all boys pass their initiation rites before onset of wet dreams, namely 82.2% of all boys. Only 12 boys have passed initiation after first wet dreams (1.8%). For those boys who have not yet passed initiation rites, but are physically mature (27 boys or 4.1%) the situation is unclear, because initiation is not necessarily done for all¹³. For the 67 boys (10.3%) both options are still open.

4.3 Sexual Behaviour

4.3.1 Age at First Sex

Among all students involved in the survey, 44.7% indicated being sexually active. For girls the percentage of reported sexual involvement is 29.5%, whereas for boys the percentage is 65.5%. The age at first sexual intercourse of the 695 students (265 girls and 430 boys) who report being sexually active, is presented in Table 5. It must be noted that at the age of sixteen, 96% of all students already had sex.

Table 5: Age at first sexual intercourse (in %)

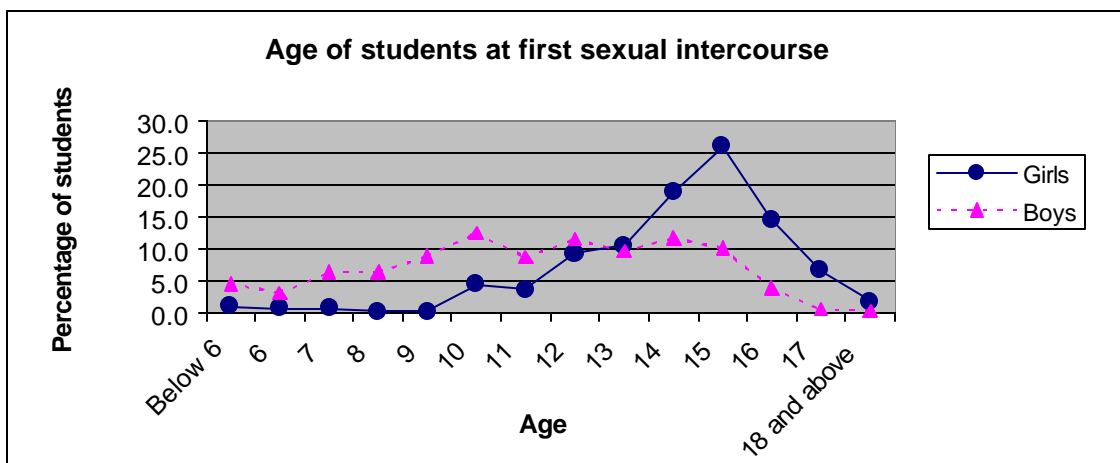
	Girls (N=265)	Boys (N=430)	Total (N=695)
Below 6	1.1	4.7	3.3
6	0.8	3.3	2.3
7	0.8	6.5	4.3
8	0.4	6.5	4.2
9	0.4	9.1	5.8
10	4.5	12.6	9.5
11	3.8	8.8	6.9
12	9.4	11.6	10.8
13	10.6	9.8	10.1
14	18.9	11.9	14.5
15	26.0	10.2	16.3
16	14.7	4.0	8.1
17	6.8	0.7	3.0
18 and above	1.9	0.5	1.0
Total	100.0	100.0	100.0

The following graph depicts very well that boys report an earlier onset of sexual activity than girls. Among boys, ages 10 to 15 show the highest responses of starting to have sex, however, there is no clear-cut culmination point. Among girls, more and more start being involved in sexual activities after age 9 leading to a culmination point between ages 14 and 16.

¹² About half of them belong to the category of "others", where roughly 50% do not perform initiation rites. I.e. about one quarter of the 55 will most probably not pass initiation at all. The remaining three quarters will most probably be part of the group, which passes initiation after menarche.

¹³ About one third of them belong to "other tribes", where roughly 25% do not perform initiation. I.e. about one twelfth of the 27 boys will not pass initiation. It can be therefore concluded that most of the boys (11/12) will pass initiation after onset of wet dreams.

Graph 3: Age of students at first sexual intercourse



This table is likely to contain very important information with regard to the sexual behaviour of adolescents, especially boys. For boys, the fact that they can have an erection is a sufficient precondition for first attempts of penetration. It seems that among boys, child-like games involving the discovery of one's own sexuality gradually develop into mature sexual intercourse, without a marked border of entering adulthood. Within this continuous process, the concept of first sex as being an important milestone in a person's individual development does not seem to fit.

Within the region, in Lindi urban fewer students report to have had sex already (32.5% Lindi urban vs. 44.7% entire region), while Lindi rural and Ruangwa are almost at regional average. In Nachingwea on the other hand more students than average claim to be already involved in sexual activities (56.0% vs. 44.7%).

Table 6: Regional data on first sexual contact (both girls and boys)

		Regional total (N=695)	Lindi urban (N=135)	Lindi rural (N=117)	Ruangwa (N=75)	Nachingwea (N=368)
Girls (N=265)	Mean age	14.0	12.2	14.4	14.3	14.3
	Median	14	13	15	14	15
Boys (N=430)	Mean age	11.1	10.7	11.3	11.7	11.2
	Median	11	11	11	12	11
All (N=695)	Mean age	12.2	11.2	12.4	12.7	12.5

Looking at the age of first sex, it becomes **apparent that boys' mean age at first sex is 2.9 years below girls' mean age at first sex.** Among both groups (boys and girls) the students of Lindi urban have the lowest mean age. The highest mean age for girls is reported in Lindi rural, whereas for boys it is in Ruangwa.

The early onset of sexual activity is an issue, which is again and again questioned. In order to get a clearer image of the characteristics of such early attempts, the next sub-chapter focuses on the correlation between being involved in sexual activities and physical maturing of the adolescents.

4.3.2 Correlation between Sexual Activity and Physical Maturing

The correlation between having sex and being physically mature has different implications for girls and boys. An incomplete process of maturing does not necessarily hinder a girl from

having sex "functionally" (meaning the physical process of penetration), except if the vagina is still much smaller than required. Most importantly, being or not being mature has implications for girls with respect of the danger of getting pregnant following sexual contact. For a boy, however, physical immaturity has important implications when trying to perform a penetration, as his erection may not be sufficient.

Among girls the situation is as follows: With regard to pregnancies, those without sex (630 girls or 70.5%) and the sexually active without menstruation (68 girls or 7.6%) are not endangered. The remaining 196 girls (21.9%) were at risk of getting pregnant at a young age at the moment the study was conducted. Among these 196 girls, 29% (57 girls) started sex before having their first menstruation, 38% (74 girls) started in the same year and 33% (65 girls) started after menarche.

However, with regard to STIs, all 264 girls who already have sex (29.5%) are in danger of being infected.

Table 7: Cross tabulation age at first sexual contact and first menstruation (in %)

	Menarche below 13	Menarche at 13	Menarche at 14	Menarche at 15	Menarche at 16	Menarche above 16
Sex before menarche	25.0	5.9	29.6	27.5	38.7	46.2
Sex in the same year	8.3	47.0	29.6	43.5	45.2	38.5
Sex after menarche	66.7	47.1	40.8	29.0	16.1	15.4
Total	100.0	100.0	100.0	100.0	100.0	100.0

Those girls who experienced their menarche early are more likely to have sex after menarche and those who had their first menstruation late, are more probable to have first sex before menarche. On the basis of these data one can conclude that physical maturity is not a necessary precondition for the onset of sexual activity among girls. However, physical maturity seems to be an encouraging factor for sexual activity as the mean age of having first sex is lower among of those who had their menarche early, than among those who had their menarche late. E.g. those who had the menarche below age 13, the mean age at first sex is 11.8 years, those with menarche at 15 the mean age at first sex is 14.2 years and for those with menarche above age 16, the mean age at first sex is 15.6 years.

With regard to the correlation of boys' physical maturing process and the onset of sexual involvement the following statements can be made. Those without sexual activity (224 or 34.5%) and those who have sex but no wet dreams (180 boys or 27.6%) are obviously save with regard to causing pregnancies. The chances of causing pregnancies for those having sex without having had wet dreams is very low, however, pregnancy can not be totally excluded. A boy may have "functional sperms" without necessarily experiencing wet dreams and maturity may set in at any time. Those 247 boys (37.9%) who have had wet dreams and who are sexually active, are most prone to cause pregnancies.

Table 8: Cross tabulation age at first sexual contact and onset of wet dreams (in %)

	Wet dreams below 13	Wet dreams at 13	Wet dreams at 14	Wet dreams at 15	Wet dreams at 16	Wet dreams above 16
Sex before wet dreams	50.0	63.2	69.5	61.0	74.1	93.8
Sex in the same year	12.5	18.4	18.6	27.1	18.5	0.0
Sex after wet dreams	37.5	18.4	11.9	11.9	7.4	6.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

At all age groups, the category of those who had sex before wet dreams is the largest one. The percentages range between 50.0% (for those with onset of wet dreams below age 13)

and 93.8% (for those with onset of wet dreams after age 16). Similarly to girls, the first sex does not seem to be directly linked with physical maturity of the adolescent person. However, wet dreams seem to be an encouraging event for starting sexual activities, as the mean age of first sex raises as the boys' age of first wet dreams increases. E.g. the mean age of those who had wet dreams below age 13 is 10.4 years, while it is 11.5 years for those who had wet dreams at age 14 and 13.2 years for those who had wet dreams at age 16.

Table 9 summarises the extent of premature sex, as reported by the sexually active students involved in the survey. 79.7% of the boys who had sex already, started to do so, when they had not yet experienced wet dreams (42.2% of boys sexually active, but premature plus 37.5% of mature boys, who started sex before wet dreams). 10.5% had first sex and first wet dreams within the same year (i.e. not conclusive which process took place first) and only 9.8% had sex after sexual maturity.

Table 9: Premature first sexual contact vs. onset of sexual activity after physical maturity

	Boys	
	Number	%
Already had sex, but no wet dreams up to now	180	42.2
Started sex before wet dreams and has wet dreams now	160	37.5
Sex in the same year as wet dreams	45	10.5
Sex after first wet dream	42	9.8
Total	427	100.0

Although the fact that boys practise premature sex is promising with regard to causing pregnancies, the danger of disseminating STIs should not be underestimated. STIs can be transmitted whether or not the respective boy has completed his process of sexual maturity. Therefore, the 65.6% (427 out of 651 boys) who indicate to have had sexual contacts are at potential risk of getting infected.

4.3.3 Choice or no Choice

When investigating about circumstances of first sex, the study only analyses those 290 girls who have already been involved in sexual activities.

Table 10: Answer to question "When you had sex for the first time, was it by force or willingly?" by sexually active girls only

	Girls	
	Number	%
I was forced	81	27.9
I wanted myself	209	72.1
Total	290	100.0

Slightly more than one quarter of those who had sex, reported that they had been forced to do so (27.9%). It is unclear whether this only includes physical violence and rape, or whether "softer forms" of forcing a girl (e.g. by threatening to spread rumours about the respective girl or by promising gifts and money) are also seen as applying force. In a next study, it would be interesting to find out more about this issue, in order to adequately address each different type of forcing and/or encouraging girls to have sex.

Table 11: Voluntary or forced sex by age at first sexual intercourse

	Below 10 (N=9)	10 & 11 (N=21)	12 & 13 (N=52)	14 & 15 (N=114)	Above 15 (N=61)	Total (N=257)
Voluntarily (N=186)	22.2	47.6	76.9	78.1	73.8	72.4
By force (N=71)	77.8	52.4	23.1	21.9	26.2	27.6
Total	100.0	100.0	100.0	100.0	100.0	100.0

The results of this cross-tabulation are very clear. While the percentage for voluntary sex of girls below 10 years is only 22.2% it gradually increases as the age of first sexual contact increases. For the categories of girls having first sex after 12 the respective percentages is around 75%. Accordingly, the percentage of forced sex decreases with the age of the girl at first sexual contact.

Although the sample is a small one (257 girls), the result clearly points at younger girls being in danger of forced sex. It would be interesting to investigate more about this, especially with regard to out-of-school girls who are probably even more in danger, as their "daily timetable" is less controlled.

Among boys the situation is as follows: With regard to the circumstances of first sex, 30.2% of indicated not having had sex yet. The answers of the remaining 455 boys are presented in table 12.

Table 12: Answer to question "When you had sex for the first time, was it by force or willingly?" by sexually active boys

	Boys	
	Number	%
I forced the girl	39	8.6
The girl wanted herself	416	91.4
Total	455	100.0

When solely focusing on those who already being involved in sexual activities, the percentage of those who acknowledges to having forced the girl is at 8.6%, while 91.4% report that the girl agreed to having sex.

The analysis of this question is quite tricky for several reasons. Firstly, there is a tendency among boys to show off with sexual "achievements", which could lead to an over-reported rate of forcing. Secondly, the fact that the question only refers to first sex, could lead to a under-estimating the full scope of boys who ever forced a girl to have sex. It might be less probable that a boy forces his first girl, because of personal insecurity (avoiding problems by finding someone who also wants to have sex). In addition, the perception of what "forcing a girl" means has not clearly been established in the survey and most probably differs between boys and girls.

4.3.4 Existence and Characteristics of Adolescents' current Lovers

Table 13: Answer to question "How many times did you have sex in the last month?"

	Girls		Boys		Total	
	Number	%	Number	%	Number	%
1	65	7.2	52	8.0	117	7.6
2	28	3.1	42	6.5	70	4.5
3	22	2.4	37	5.7	59	3.8
4	5	0.6	15	2.3	20	1.3
5	3	0.3	12	1.9	15	1.0
6 to 10	8	0.9	27	4.2	35	2.3
More than 10	5	0.6	13	2.0	18	1.2
No sex last month	764	84.9	449	69.4	1213	78.4
Total	900	100.0	647	100.0	1547	100.0

It is interesting to see that only a proportion of students who report to have had sex already, acknowledge having had sex in the last month. Among the boys, 63.5% report to have had sex already, but only 30.6% acknowledge being sexually active in the last month.

With girls recent sexual contacts are less common than among boys (15.1% vs. 30.6%). The pattern is even more accentuated with regard to multiple sexual contacts. Very few of the girls have had several sexual contacts during the last month (7.9%), while 22.6% of boys report to have had several sexual contacts.

Boys' sexual partners tend to be much younger than the girls' sexual partners (in absolute figures). While most of boys' lovers are between 13 and 15 years old, the majority of girls' lovers are between 15 and 18. A comparison of the mean ages also speaks a clear language. The mean age of boys' lovers is 13.9 years (median 14), while the mean of their own age is 15.0 years. For girls, the mean age of lovers is 17.0 (median 17), while the mean age of the girls involved in the survey is 14.6.

68.2% of girls report to have an older lover, while 73.7% of boys indicate having a relationship with a younger partner. Very few students report having old sexual partners. At a first glance, this is a positive finding with regard to HIV/AIDS transmission. However, since this question is only referring to the current lover it does not depict the whole situation of sexual interaction between adults and minors, as sexual contacts after first sex are not taken into account. It can therefore not necessarily be concluded that the youths of Lindi are a low risk of being infected with HIV/AIDS, unless more comprehensive data is gathered.

The classical pattern of girls having older lovers and boys having younger lovers seems to perpetuate itself into the next generation of sexually active people. In discussions with the adolescents, this belief proved to be very deeply rooted even among the youths. Whenever a boy reported to have sex with an older girl or a girl reported to have sex with a younger boy the entire group expressed amazement and/or disapproval.

The rate of those reporting on their lovers' profession is 28.3% for girls and 51.3% for boys (out of total sample of students). Within this group, the current lovers of the students are in most cases students, for both girls and boys. Among the girls' lovers then follow small business operators, unemployed and farmers/ craftsmen.

Table 14: Girls' answers to question "What is your lovers profession/ activity?" (N=256)

	Number	%
Pupil/ student/ apprentice	110	43.0
Small business	60	23.4
Big business	27	10.5
Farmer/ Craftsman	38	14.8
Driver	7	2.7
Civil servants (teacher, police, military, doctor, nurse)	3	1.2
Other job	6	2.3
Has no job	39	15.2

Besides the category of students and apprentices, there are girls doing housework or "just being at home without job", small business operators and farmers among boys' lovers. This seems to be a usual cross-section of people living in the villages/ in town, which has to be taken into account when designing a specifically targeted intervention strategy.

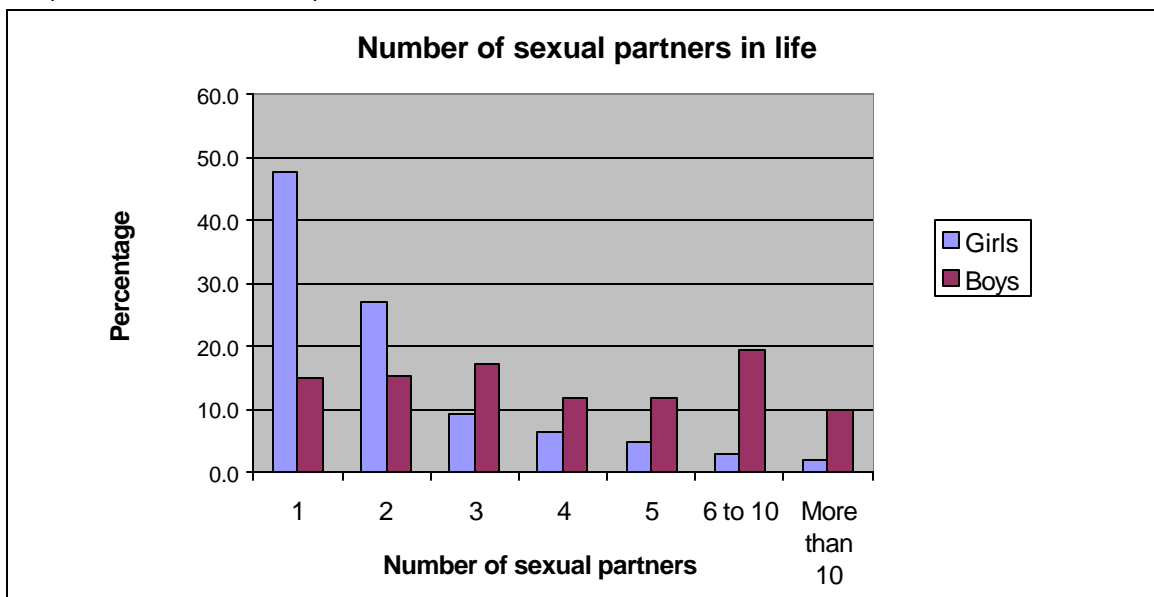
Table 15: Boys' answers to question "What is your lovers profession/ activity?" (N=337)

	Number	%
Pupil/ student/ apprentice	190	56.4
Housework/ has no job	142	42.1
Teacher	2	0.6
Small business/ food vendor	30	8.9
Big business	5	1.5
Farmer	19	5.6
Office work	1	0.3
Other job	5	1.5

4.3.5 Number of Sexual Partners in Life

Boys more often have several sexual partners in life than girls do. Only 14.8% of sexually active boys have had one single partner, while 85.2% have had several partners (two up to more than ten). Among the girls, 47.7% had one partner so far, while 52.3% had several lovers (two up to more than ten).

Graph 4: Number of sexual partners in life



If presented in a graph, the pattern even becomes more evident. Girls show a high rate of having one partner only, and the rates then gradually decrease with increasing numbers of partners. Among boys there is no distinct pattern to be discerned, there are fluctuating rates for all the categories (single partner, few partners up to more than 10 partners). This is probably partly reflecting the reality of boys having several sexual partners and partly reflecting male inclination of exaggerating "sexual achievements".

4.3.6 Reporting Rates of having Sex for Different Questions

In this sub-chapter the reporting rates of being sexually active in different questions are summarised and compared.

Table 16: Reporting rates of sexual activity for different questions

	Girls		Boys		Total	
	Number	%	Number	%	Number	%
1. Age at first sexual contact? (N _g =899; N _b =656; N _t =1555)	265	29.5	430	65.5	695	44.7
2. Sex by force or willingly? (N _g =888; N _b =652; N _t =1540)	290	32.7	455	69.8	735	47.7
3. How many sexual partners in life? (N _g =899; N _b =657; N _t =1556)	277	30.8	438	66.7	715	46.0
4. Ever used a condom? (N _g =900; N _b =656; N _t =1556)	250	27.8	429	65.4	679	43.6
5. Used a condom at last sex? (N _g =901; N _b =654; N _t =1555)	249	27.6	428	65.5	677	43.5
6. How many times sex last month? (N _g =900; N _b =647; N _t =1547)	136	15.1	198	30.6	334	21.6
7. Age of bodily lover? (N _g =900; N _b =656; N _t =1556)	224	24.9	309	46.9	533	34.2
8. Profession of bodily lover? (N _g =903; N _b =657; N _t =1560)	256	28.3	337	51.3	593	38.0

Responses to the five questions follow a clear pattern of quite stable reporting rates by both sexes. The percentage of sexually active girls is between 27.6% and 32.7%, while the percentage for boys ranges between 65.4% and 69.8%.

In the question, which refers to current sexual activity (question 6) the reporting rate is much lower, both for girls and for boys. Girls' reporting rate is between 15.1% and 18.0%, while boys' reporting rate ranges from 21.6% to 23.5%. The reporting rate then gradually increases for the last two questions, to 24.9% and 28.3% for girls, similarly for boys to 46.9% and 51.3%. This increase in questions 7 and 8 could be explained by the fact of students referring to any lover they had, rather than just referring to the current lover (as asked for in the questionnaire).

On the basis of these data, the following conclusion can be drawn: Approximately 30% of girls seem to have had sex at least once, and about 15-20% seem to currently be sexually active. Among boys, the percentage of those with at a one-time exposure to sex is at around 65%, while approximately 30% currently have a bodily lover.

4.4 Condom Use

4.4.1 Exposure to Condoms in General

Table 17: Answer to question "Have you or your lover ever used a condom?" among those who already had had sex

	Girls		Boys		Total	
	Number	%	Number	%	Number	%
Yes	81	32.4	48	11.2	129	19.0
No	169	67.6	381	88.8	550	81.0
Total	250	100.0	429	100.0	679	100.0

32.4% of girls report that their partners have used condoms at least once during sexual interaction, whereas only 11.2% of boys report to ever having used a condom. An obvious stumbling block for adolescent boys to make use of condoms is the size of condoms in relation to the size of penises. The mean age of those having used condoms already is 15.9 years (median 16), while the mean age of those not yet having used condoms is 15.0 years (median 15).

The higher rate of girls reporting safe sex, may be a hint a girls having either older sexual partners and/or other partners than their school mates. The second case, however, would be in contradiction with the age indication of sexual partners. Also, it has been reported in other parts of Tanzania that boys/men tell girls that they use a condom, but since many girls have never actually seen one, can not judge whether they are told the truth or not. Anyhow, the conclusion that condom use is still very limited among adolescents can be made at this point.

4.4.2 Current Use of Condoms

Students were asked whether they used a condom when last having sex, in order to measure current use of condoms among adolescents. As expected, frequent condom use is even less common than general exposure to condoms. The average percentage of students using condoms drops from 19.0% to 16.3%, while in gender specific data for girls the decline is from 32.4% to 26.9% and among boys from 11.2% to 8.2% only. This finding sheds a dark light on the potential protection of adolescents against pregnancies, STIs in general and HIV/AIDS in specific.

4.5 Knowledge about Reproductive Health and HIV/AIDS

4.5.1 Pregnancy at First Sex

Very low percentage of students, namely 16.2% know that first sex can lead to pregnancies. The same conclusion could be drawn from the group discussions with the children, where the message of first sex potentially leading to pregnancy was always received with amazement.

Girls are even less aware of this fact than boys (14.0% girls vs. 19.2% boys) and a greater percentage indicates its ignorance about the fact (49.4% girls vs. 31.6% boys). Boys show a lower percentage of acknowledged ignorance ("do not know") but do have a higher level of real ignorance, by answering "no" to the question.

When comparing the answers of the sexually active and inactive students, the following situation presents itself (see table 18). The difference in percentage between those knowing the truth before and after first sex seems to be bigger among girls than among boys (test significance... probably not?!). An interesting phenomenon is that among the sexually active a higher percentage indicates that first sex can not lead to pregnancy. These students' answers could be based on their own experience of having first sex without becoming pregnant or

impregnating the girl. The adolescents seem to rely on "trial and error" procedures with regard to increasing knowledge about reproductive health, as reliable sources of information are scarce.

Table 18: Answer to the question "Can a girl get pregnant at first sexual intercourse?" for sexually active and sexually inactive students

	Girls		Boys	
	Before first sex (N=633)	After first sex (N=265)	Before first sex (N=225)	After first sex (N=429)
Yes	11.5	19.6	17.3	20.0
No	30.6	50.9	36.9	55.7
Do not know	57.8	29.4	45.8	24.2
Total	100.0	100.0	100.0	100.0

4.5.2 Contraception

Among girls, 12.8% indicated that they do not know about potential means of contraception, while among boys the percentage of acknowledged ignorance is 11.6%. The answers of the remaining 787 girls and 581 boys are presented in table 19. For the most frequently mentioned answers, the mean and median age of the respondents is indicated.

Table 19: Answer to the question "What can a girl/boy do to avoid pregnancy?"

	Girls		Boys	
	% (N=787)	Mean/median age	% (N=581)	Mean/median age
Have no sex	58.1	14.5/ 14	36.5	14.9/ 15
Jump several times after sex	6.6	--	n.a.	n.a.
Use a condom	43.1	15.0/ 15	77.5	15.1/ 15
Coitus interruptus	16.3	15.2/ 15	24.4	15.1/ 15
Wash intimate parts after sex	12.6	--	8.4	--
(Ask the girl to) take the pill	63.4	14.8/ 15	29.1	15.3/ 15
Drink very strong tea after sex	8.5	--	n.a.	n.a.
Anal sex	11.3	--	8.4	--
Choose save days for sex	19.7	15.0/ 15	16.2	15.3/ 15

The option of not having sex is mentioned more often by girls than by boys (58.1% of girls vs. 36.5% of boys). Among those who know that having no sex is a contraceptive, 70.3% of girls (320 girls) and 40.5% of boys (182 boys) have not yet started sexual activity. However, knowledge does not seem to be directly correlated with behaviour, as the percentages for the entire sample of students (i.e. those knowing and not knowing) shows similar percentages (70.3% for girls and 34.5% for boys).

Condoms seem to be more widely known among boys than among girls. Out of the boys, who claim to know that condoms are a functional contraceptive, 9.1% have ever used a condom. This again points to the fact that having heard of the condom alone does not protect young people sufficiently, there is a need for parallel creation of a conducive environment for behavioural change.

63.4% of girls mention the pill as being a potential contraceptive. Among those, about 50% advocate accessibility of pills for adolescents, 30% are not decided and 20% of girls favour pill use by adults only (see opinion polls, chapter 5). Among boys, only 25.7% judge pills to be a functional contraceptive. The means of contraception seem to be perceived stronger by the sex, which will be responsible for the appropriate application (girls mention the pill more often than boys and boys mention the condom more often than girls).

For both girls and boys, the mean age of those indicating that abstinence is a contraceptive is lowest.

Table 20: Answer to the question "What can a girl/boy do to avoid pregnancy?" of the sexually active and the sexually inactive (in %)

	Girls		Boys	
	Before first sex (N=633)	After first sex (N=265)	Before first sex (N=226)	After first sex (N=430)
Have no sex	50.5	50.9	37.6	29.1
Use a condom	29.2	57.0	59.3	73.3
Coitus interruptus	9.1	26.0	18.1	23.5
(Ask the girl to) take the pill	51.1	64.9	20.8	28.1
Choose save days for sex	12.3	28.3	10.6	16.0

When comparing knowledge before and after first sex, the cumulative number of correct answers increases more among girls than among boys¹⁴. While before sex both boys and girls give 1.5 correct answers per person, the ratio of answers per student increases to 2.3 correct answers per respondent among girls, while only increasing to 1.7 answers per respondent among boys.

The biggest increase seems to be with regard to condom being a functional contraceptive. Among girls the percentage raises from 29.2% to 57.0% and among boys there is an increase from 59.3% to 73.3%. Regarding abstinence from sexual intercourse, the percentage of girls remains practically the same, while it even decreases among boys (from 37.6% to 29.1%).

4.5.3 AIDS/HIV Transmission

Among all students, 19.8% acknowledges not knowing how HIV/AIDS is transmitted. For girls the percentage is 24.8%, whereas for boys it is 12.9%. The answers of the remaining 1251 students (679 girls and 572 boys) are presented in Table 21.

Table 21: Answer to question "How can one get the HIV/AIDS virus?" (in %)

	Girls (N=679)	Boys (N=572)	Total (N=1251)
Drink from the same bottle	9.7	14.5	11.9
Sexual intercourse	90.0	90.6	90.2
Shake hands	5.0	5.2	5.1
Bathe in the same river	13.0	7.3	10.4
Deep kissing	23.6	22.0	22.9
Mosquito bites	11.8	11.9	11.8

For both sexes, sexual intercourse is identified most often as a means of getting HIV/AIDS. All wrong answers were not very often mentioned and there are only minor differences between boys and girls. Besides sexual intercourse, most responses were given to deep kissing, which indeed is a debated issue (probability of infection is very low, but existing).

¹⁴ For this question multiple answers were possible, i.e. the ratio of answer per respondent can be calculated.

Table 22: Answer to question "Can you be infected with HIV/AIDS by a healthy looking person?"

	Girls (N=899)	Boys (N=655)	Total (N=1554)
Yes	30.1	52.8	39.7
No	22.8	23.8	23.3
Do not know	47.1	23.4	37.1
Total	100.0	100.0	100.0

Alarming few students know that one can be infected from a healthy looking person. Among girls the level of knowing is substantially lower than among boys (30.1% versus 52.8%) and more girls acknowledge their ignorance. The percentage for wrong answers is about the same for girls and boys.

4.5.4 AIDS/HIV Prevention

Table 23: Answer to question "What can you do to protect yourself from being infected?"

	Girls (N=903)		Boys (N=657)	
	Number	%	Number	%
Use condoms	463	51.3	491	74.7
No sex with bar maids	n.a. ¹⁵	n.a.	106	16.1
No sex with elder men	139	15.4	n.a.	n.a.
Sexual abstinence	545	60.4	300	45.7
Avoid living in the same house with infected people	83	9.2	37	5.6

For girls the most common option of avoiding a HIV/AIDS infection is not having sex (60.4%), followed by the use of condoms (51.3%). Boys judge the option of sexual abstinence less often to be an option for themselves (45.7%), whereas they would want to rely on condoms for protection more often (74.7%). For both girls, as well as for boys all other options lay far behind.

When comparing the percentages of sexual abstinence and condom use with regard to HIV/AIDS protection and with regard to prevention of pregnancies, a similar pattern presents itself. In both cases, boys favour condoms over abstinence and girls favour abstinence over condoms.

¹⁵ n.a. meaning that one of the two sexes was not given these respective choices

5. KAP Findings Part II (Opinions)

5.1 Sex before Marriage

Virginity still is an important factor in Tanzanian society and parents would wish their daughter to get married as a virgin. Accordingly, bride prices are higher for virgins. The fact that it is nowadays more and more difficult to oversee girls' activities poses a problem to many parents. As a means of avoiding pre-marital sex, parents may opt for early initiation of girls and for marrying off their girls at a young age.

Table 24: Difference in opinion on statement "Nowadays it is not easy for a girl to remain virgin until marriage." before and after first sex

	Girls			Boys		
	All (N=855)	Before first sex (N=621)	After first sex (N=259)	All (N= 649)	Before first sex (N=225)	After first sex (N=423)
I agree	29.8	27.2	35.9	34.2	33.8	34.5
I disagree	35.3	31.4	44.4	45.0	36.0	49.6
Do not know	34.9	41.4	19.7	20.8	30.2	15.8
Total	100.0	100.0	100.0	100.0	100.0	100.0

Roughly 30% of girls agree that it is difficult for girls to remain virgins until marriage. This percentage corresponds with the 30% who acknowledge having had sex already (see Table 16). Approximately 35% of girls disagree with the statement and the same percentage indicates that they do not have an opinion on the issue.

Boys' higher percentage of disagreeing (45.0%) may show their will to be married to a virgin, while at the same time suppressing their reality of having sex with girls.

After first sex, fewer girls have no opinion about virginity at marriage (decrease from 41.4% to 19.7%). It is striking to see that the rise in disagreement is larger than the rise in agreeing to the statement. Boys attitude remains almost the same with regard to agreeing, however, disagreement rises from 36.0% to 49.6%.

Comparing the perceived possibility of boys' and girls' sexual abstinence until marriage, discrepancies become very apparent. While only 34.2% of boys agree that it is difficult for girls to abstain, 70.7% agree that it is difficult for them to abstain from sex. The same pattern is visible with girls, where 29.8% of girls find it difficult for themselves to abstain, while 58.3% agree that it is difficult for boys to abstain from sex. This clearly points at the pattern of accepted behaviour for female and male persons. While girls are supposed to remain virgins, boys are supposed to gather experiences.

Table25: Opinion on statement "It is normal for boys to have sex before marriage."

	Girls		Boys		Total	
	Number	%	Number	%	Number	%
I agree	512	58.3	456	70.7	968	63.6
I disagree	140	16.0	127	19.7	267	17.5
Do not know	226	25.7	62	9.6	288	18.9
Total	878	100.0	645	100.0	1523	100.0

The difference in opinion between the sexually active and inactive students follows a similar pattern among boys and girls. In both cases, the percentage of not having an opinion decreases and the percentage of those stating that boys normally have sex before marriage increases (from 53.5% to 70.1% for girls and from 57.9% to 77.5% for boys).

5.2 (Power) Balance & Relationships between Boys and Girls

Table 26: Opinion on statement "Boys put girls under pressure to have sex."

	Girls		Boys		Total	
	Number	%	Number	%	Number	%
I agree	368	41.9	281	43.6	649	42.6
I disagree	262	29.8	294	45.7	556	36.5
Do not know	249	28.3	69	10.7	318	20.9
Total	879	100.0	644	100.0	1523	100.0

Roughly the same percentage of girls and boys agree to the fact that boys put girls under pressure to have sex. 45.7% of boys disagree in self-defence, saying that there is no pressure involved in encouraging girls to have sex. Only 10.7% of boys do not have an opinion about this issue, whereas 28.3% of girls state not having an opinion. This phenomenon of girls rather acknowledging ignorance/ uncertainty can be observed throughout this study and has been documented in other studies as well.

When comparing the opinions of sexually active and inactive students, the most evident difference is the percentage of those not having an opinion, which is substantially lower among those who are already sexually active. Otherwise, both the rate of agreeing and disagreeing increases for those already having sexual intercourse.

Table 27: Opinion on statement "Girls agree to having sex because of presents and money."

	Girls		Boys		Total	
	Number	%	Number	%	Number	%
I agree	576	64.9	516	79.5	1092	71.1
I disagree	126	14.2	91	14.0	217	14.1
Do not know	186	20.9	42	6.5	228	14.8
Total	888	100.0	649	100.0	157	100.0

Compared to the rate of students agreeing that pressure is involved in decision-making about having sex, many more agree that material incentives (such as presents or money) are involved. Almost 80% of the boys judge material incentives as a means of convincing girls to have sex, and roughly 65% of girls agree that female partners are convinced by such material incentives. The percentage of those disagreeing is very low (about 14% for both girls and boys). Very few boys (6.5%) and about 21% of girls do not have an opinion about the issue.

The outcome of this option poll hints at the fact that more girls are mildly or strongly forced to have sex than generally acknowledged. When referring to their first sex, 29.7% of girls state that they had been forced to have sex, whereas only 8.6% of boys acknowledge to have forced a girl. These percentages are far below the indication in the opinion poll about applying force or material incentives.

The outcome of the opinion poll about the power relations between girls and boys when deciding on sex is a first indicator for the reality of adolescents. While an average of 42.6% of all students agree that boys put girls under pressure to have sex, an average of 71.1% of all students agree that girls get involved in sexual intercourse because of presents and money. It would be interesting to compare the results of the opinion poll (no direct reference to behaviour of the interviewed person) with a concrete question about the behaviour of the interviewed person. Such a question could be "Have you ever (been) given presents or money in exchange for having sex?" and/or "Have you ever (been) threatened (a girl) verbally, if not agreeing to have sex?" and/or "Have you ever (been) physically forced (a girl) to have sex?". These three questions would then cover different levels of applying force or pressure on girls to get involved in sex.

When comparing the opinions of sexually active and inactive students, the most evident difference is the percentage of those not having an opinion, which is substantially lower among those who are already sexually active. Otherwise, both the rate of agreeing and disagreeing increases for those already having sexual intercourse.

Table 28: Opinion on statement "Girls should avoid being together with boys after classes."

	Girls		Boys		Total	
	Number	%	Number	%	Number	%
I agree	474	54.0	321	49.5	795	52.1
I disagree	208	23.7	262	40.3	470	30.8
Do not know	195	22.3	66	10.2	261	17.1
Total	877	100.0	649	100.0	1526	100.0

Roughly 52% of students (both boys and girls) agree that girls should not stay around with boys after classes. There is only a difference between boys and girls with regard to those who are in favour of staying together and those without an opinion. While only 23.7% of girls judge it to be desirable for girls to stay with boys, 40.3% of boys wish to stay with girls after classes. This could be a sign of boys being more eager to become involved with girls, while girls being satisfied with the company of their own sex for reasons of fearing pressure from boys and for fear of breaking moral rules of society.

5.3 Contraception (pill & condom use)

Table 29: Opinion on statement "Contraceptive pills are for adult women and not for girls."

	Girls		Boys		Total	
	Number	%	Number	%	Number	%
I agree	157	17.9	179	27.7	336	22.0
I disagree	411	46.8	311	48.1	722	47.3
Do not know	311	35.3	157	24.2	468	30.7
Total	879	100.0	647	100.0	1526	100.0

46.8% of girls and 48.1% of boys seem to accept contraceptive pills as a means of avoiding pregnancies among adolescents. When cross-tabulating this with the results of the question "What can a girl do to avoid pregnancies", interesting conclusions can be drawn. Out of the 411 girls who advocate the accessibility of pills for youths, only 59.9% judge pills to be an accessible contraceptive, while 40.4% acknowledge that current accessibility is hampered. The outcome of the cross-tabulation shows that those two questions are being perceived at two different levels, the level of reality and the level of desired change. The question "what could a girl do to avoid pregnancies?" refers to the options the girls see for themselves. The opinion poll refers to wishful thinking of the girls, in an environment, where it is very difficult for girls to get access to contraceptive pills.

Table 30: Difference in opinion on statement "Contraceptive pills are for adult women and not for girls." before and after first sex

	Girls		Boys	
	Before first sex (N=620)	After first sex (N=255)	Before first sex (N=222)	After first sex (N=423)
I agree	15.8	22.7	22.1	30.7
I disagree	42.9	56.1	39.6	52.5
Do not know	41.3	21.2	38.3	16.8
Total	100.0	100.0	100.0	100.0

Again, the percentage of students not having an opinion is lower among sexually active students than among inactive students. It is interesting (and understandable) that especially

the sexually active girls advocate for the pill more strongly after having had first sexual intercourse. At the same time it is remarkable that more than half of the boys support the use of pill for girls.

With regard to condom use, a large percentage of girls (44.5%) does not know, what to think about condom use. This is probably due to low exposure to the existence and the potential benefits of condoms and to a general lack of certified knowledge. Among those who have an opinion half advocate condom use and half do not favour condom use among youth.

Table 31: Opinion on statement "Condoms are not good for youths because it encourages them to have sex."

	Girls		Boys		Total	
	Number	%	Number	%	Number	%
I agree	239	27.1	200	30.8	439	28.7
I disagree	251	28.4	324	49.9	575	37.5
Do not know	393	44.5	125	19.3	518	33.8
Total	883	100.0	649	100.0	1532	100.0

Among the boys about 50% are in favour of condoms. About 31% are against the use of condoms among youths and 19% do not have a distinct opinion.

Table 32: Difference in opinion on statement "Condoms are not good for youths because it encourages them to have sex." before and after first sex

	Girls		Boys	
	Before first sex (N=622)	After first sex (N=261)	Before first sex (N=223)	After first sex (N=425)
I agree	24.5	33.5	26.8	33.1
I disagree	23.5	39.2	42.0	53.9
Do not know	51.9	27.3	31.2	13.0
Total	100.0	100.0	100.0	100.0

Among boys the percentage advocating and not advocating condom use increases to approximately the same extent, while among girls, the increase of advocating condom use is more substantial than the increase of those who are against condom use. However, the percentage of boys who are favouring condom use is still above the one of girls doing so (53.9% vs. 39.2%).

With regard to the question whether condoms should be given to adolescents in order to avoid pregnancy and disease, the situation is as follows: The overall acceptance of condoms among boys and girls raises from 28.7% to 60.3%, which is quite substantial. The positive response of students to condom use increases, as focus is given on the positive aspects of condoms (avoiding pregnancy and disease, instead of relating condoms to immoral temptations).

Table 33: Opinion on statement "Condoms should be given to youths in order to avoid pregnancy and disease."

	Girls		Boys		Total	
	Number	%	Number	%	Number	%
I agree	438	49.6	487	74.9	925	60.3
I disagree	163	18.4	83	12.8	246	16.0
Do not know	283	32.0	80	12.3	363	23.7
Total	884	100.0	650	100.0	1534	100.0

Among girls, the percentage of those favouring condom use rises from 28.4% to 49.6% and the percentage of those against condom use decreases from 27.1% to 18.4%. Accordingly,

the percentage of those without distinct opinion decreases. Among boys, the percentage of those favouring condom use among youth rises from 49.9% to 74.9% and the percentage of those against decreases from 38.8% to 12.8%. Accordingly, the percentage of undecided ones slightly decreases.

Table 34: Cross-tabulation opinion about condom use and actual condom use (of sexually active students)

	Pro condom use		Against condom use		Total	
	Number	%	Number	%	Number	%
Used condom	25	10.7	14	10.6	39	10.7
Not used condom	208	89.3	118	89.4	326	89.3
Total	233	100.0	132	100.0	365	100.0

It is very revealing to compare the opinion statements with actual condom use. The attitude towards condoms does not seem to have a direct correlation with actual behaviour, as the same percentage of boys (roughly 10% each) being pro and contra condom use among youths actually make use of condoms. This low percentage is certainly due to inhibited accessibility of condoms for adolescents, but it should also be compared to actual condom use among the entire population of Lindi region. The Demographic and Health Survey (1996) states that 1.3% of women and 7.0% of men currently use condoms for contraception. This shows that in addition to the age problematic for adolescents, the non-use of condoms is largely a question of general disapproval and inaccessibility of condoms.

It is easy to understand the positive correlation of being in favour and using them, as well as the positive correlation of being against and not using them. The fact of being in favour of using condoms, but not doing so is easily explainable on the basis of changing priorities and of human beings not always acting according to their best knowledge (enjoying sex now vs. being healthy and avoiding fatherhood later on). Those who are against condom use, but who actually use them are either in a moral clinch (church and family condemn condom use vs. own behavioural decision), it could be over-reporting of condom use or a symptom of total disconnection of attitude and behaviour.

Table 35: Difference in opinion on statement "Condoms should be given to youths in order to avoid pregnancy and disease." before and after first sex

	Girls		Boys	
	Before first sex (N=620)	After first sex (N=255)	Before first sex (N=223)	After first sex (N=425)
I agree	41.7	68.0	62.8	81.2
I disagree	18.5	18.5	13.9	12.2
Do not know	39.2	13.5	23.3	6.6
Total	100.0	100.0	100.0	100.0

Among both sexes, there is a large difference with regard to those advocating condoms between sexually active and inactive students. Among girls the percentage of advocating for condoms varies between 41.7% for the sexually inactive and 68.0% for the active ones. Among boys the respective percentages are 62.8% and 81.2%. The extent of those being against condom use remains approximately the same, while the percentage of those not having an opinion largely decreases.

5.4 Teenage Pregnancies

Table 36: Opinion on statement "It is right that girls are expelled from school if they are pregnant."

	Girls		Boys		Total	
	Number	%	Number	%	Number	%
I agree	697	78.3	580	89.0	1277	82.8
I disagree	105	11.8	48	7.4	153	9.9
Do not know	88	9.9	24	3.6	112	7.3
Total	890	100.0	652	100.0	1542	100.0

The vast majority of both girls and boys agree that pregnant girls should be expelled from school (78.3% of girls and 89.0% of boys). The fact of being punished for unaccepted behaviour seems to be very well accepted among both sexes, the difference between male and female responses only being approximately 10%.

There is very little difference between the opinions of the sexually active and inactive with regard to expelling pregnant girls from school.

With regard to expelling the young fathers from school, an average of 62.0% of students agree with expulsion. There is very little difference between boys and girls in agreeing on punishment for both. However, the percentage of boys disagreeing with punishment for both (30.7%), is approximately double of the percentage of girls asking for making boys responsible for the babies they father (16.8%).

There is equally little difference between the opinions of the sexually active and inactive with regard to expelling the boys who impregnated a girl from school.

Table 37: Opinion on statement "A boy who impregnates a girl should also be expelled from school."

	Girls		Boys		Total	
	Number	%	Number	%	Number	%
I agree	561	62.9	394	60.8	955	62.0
I disagree	150	16.8	199	30.7	349	22.7
Do not know	181	20.3	55	8.5	236	15.3
Total	892	100.0	648	100.0	1540	100.0

Punishing both seems to be desirable from a point of view of justice, however, with regard to citizens' rights to education a non-punishment of both seems the better alternative. The introduction of a policy of non-punishment for both has to be accompanied by improved advocacy to students. Advocacy should contain information about the negative impacts of early pregnancy (both with regard to health and social life) and should be coupled with improved accessibility to contraceptives for adolescents.

5.5 Attitude towards People with HIV/AIDS

Table 38: Opinion on statement "People infected with HIV/AIDS should not eat from the same plate as others."

	Girls		Boys		Total	
	Number	%	Number	%	Number	%
I agree	198	22.4	164	25.5	362	23.7
I disagree	460	52.0	379	58.9	839	54.9
Do not know	226	25.6	101	15.7	327	21.4
Total	884	100.0	644	100.0	1528	100.0

Although many seem to know that to eat from the same plate does not necessarily expose you to a danger, still roughly one quarter of children would want to avoid eating from the same plate. Approximately one fifth acknowledges not knowing about appropriate behaviour.

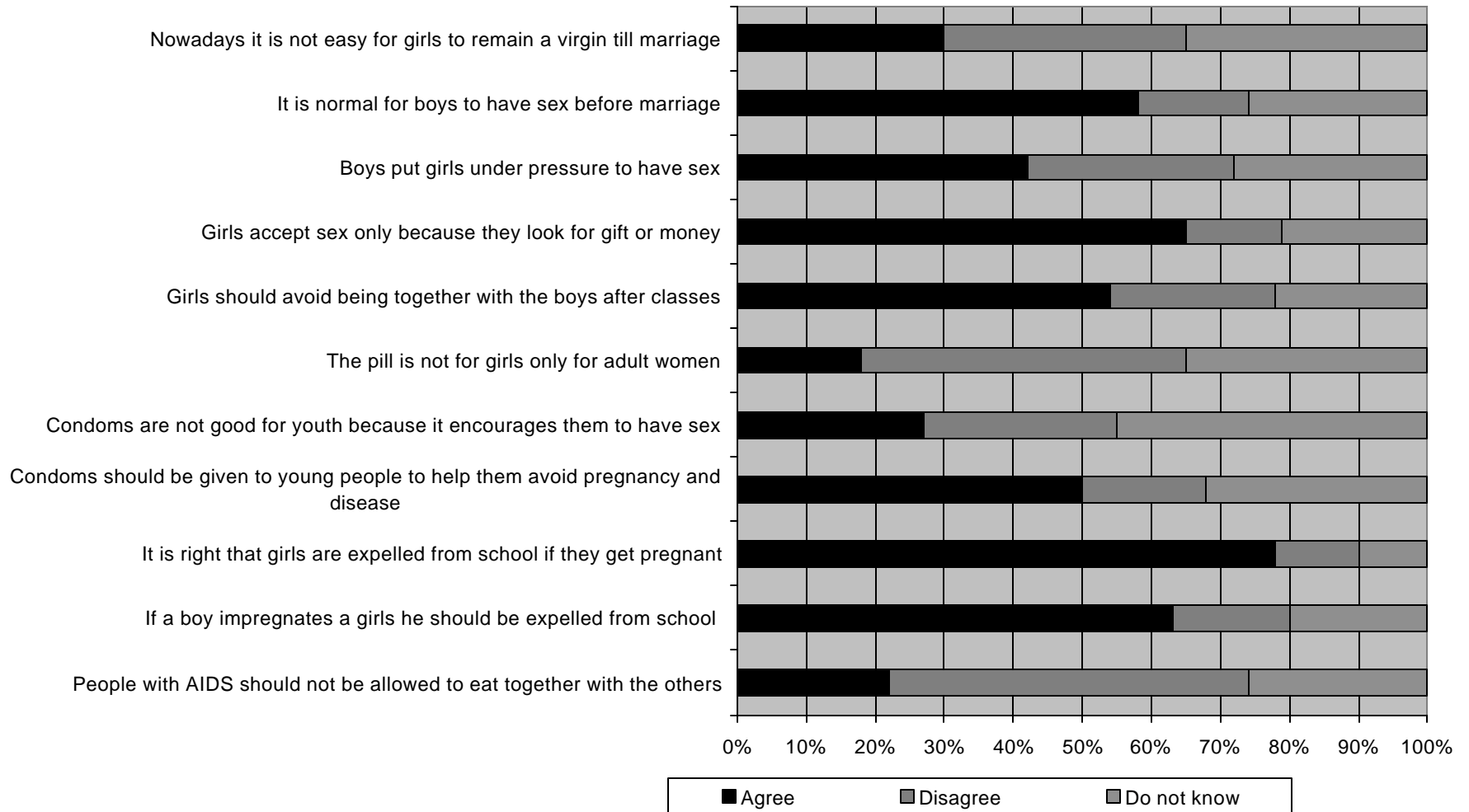
5.6 Talking about RH and STIs with Parents

Table 39: Opinion on statement "It is not possible to talk to parents about sex, love, STIs and HIV/AIDS."

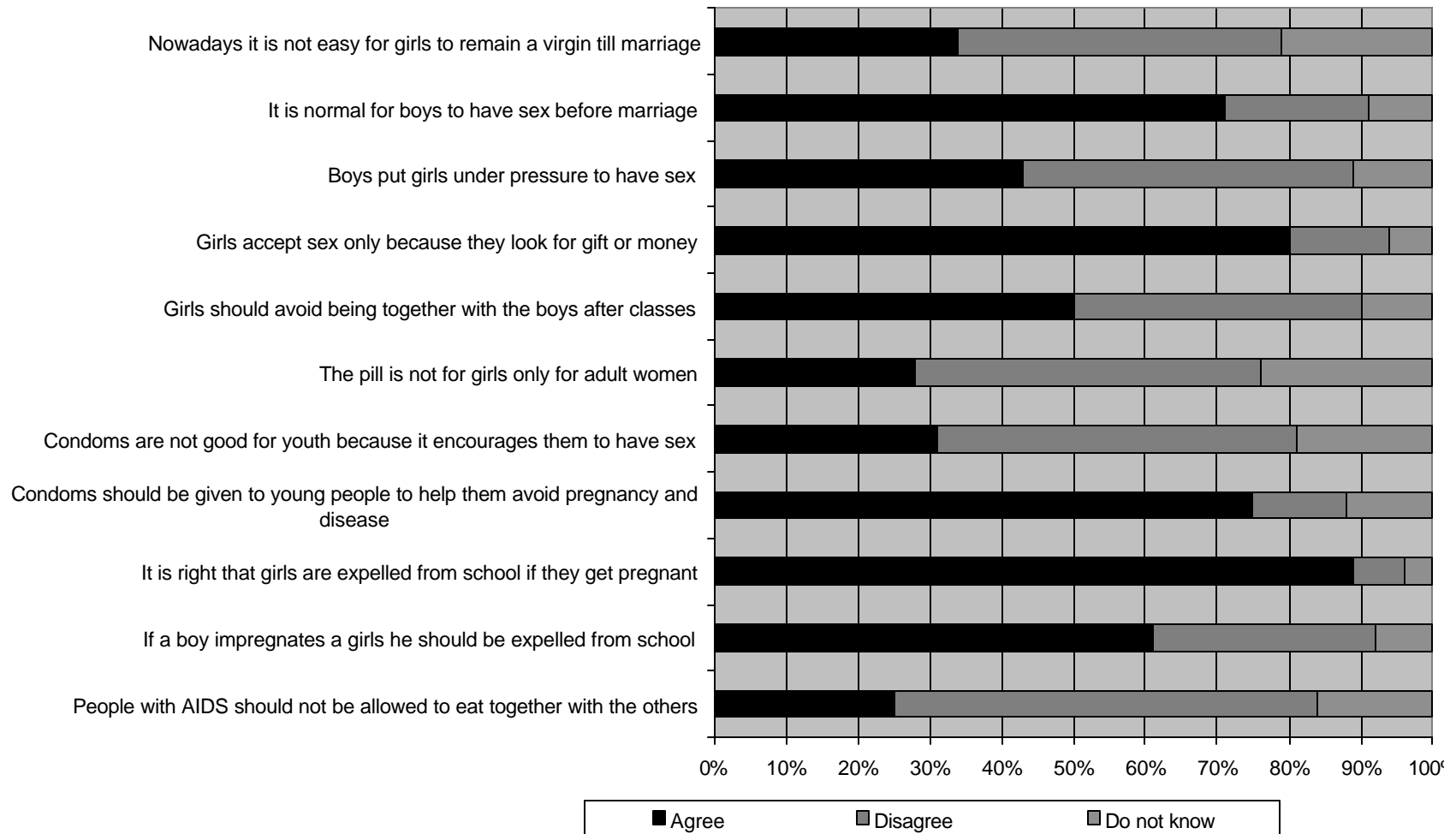
	Girls		Boys		Total	
	Number	%	Number	%	Number	%
I agree	392	44.1	303	46.5	695	45.2
I disagree	233	26.2	267	41.0	500	32.5
Do not know	263	29.6	81	12.4	344	22.4
Total	888	100.0	651	100.0	1539	100.0

It was difficult for the students to declare their opinion on this statement, because it was formulated negatively. The results shall therefore not be interpreted within the KAP survey, but on the basis of the results of the paper slip method, where a different wording was applied.

**Graph XY: Overview over girls' opinions
(in percent, N=855)**



**Graph XY: Overview over Boys' Opinions
(N=649)**



6. Implications of Findings for a Future intervention

6.1 *Justification for an Intervention*

Based on the information gathered in the KAP study, an intervention focusing on adolescent reproductive health is easily justifiable. The results of the survey clearly show that youth are sexually active. It can be stated that roughly 45% of all students involved in the study had sexual intercourse at least once. The approximated percentages for girls and boys are 30% and 65% respectively.

For boys, the fact that they can have an erection is a sufficient precondition for first attempts of penetration. It seems that among boys, child-like games involving the discovery of one's own sexuality gradually develop into mature sexual intercourse, without a marked border of entering adulthood. Within this continuous process, the concept of first sex as being an important milestone in a person's individual development does not seem to fit.

The levels of risk with regard of early pregnancy or STIs can be established. At the time of the study, approximately 22% of girls were at risk of getting pregnant at an early age¹⁶ and approximately 30% were at risk of being infected with a sexually transmitted infection, including HIV/AIDS¹⁷. Among boys the respective percentages are as follows: roughly 40%¹⁸ of boys are prone to cause pregnancy of one of their sexual partners (most of which are adolescents as well) and roughly 66% of boys are at risk of being infected with a STI, including HIV/AIDS.

Almost 50% of girls report to have had sex with one partner only, while 85% of boys have had multiple relationships. This is an important finding with regard to the spread of sexually transmitted infections, which is enhanced by the existence of multiple sexual relations, even if they are sequential.

Although the profile of students' current lover seem to be very much similar to the students own profile (young, studying or staying at home), there are indications that other sexual partners could have been older than the peer group of students. This assumption can be made on the basis of girls indicating a substantially higher percentage than boys with respect to having used a condom at least once. In the same line, the high level of acknowledging the use of presents, gifts and less pleasant forms of force when getting consent to have sex, might be an indication of older persons being among the group of sexual partners. With respect to teenage pregnancy, as well as the spread of STIs and specifically HIV/AIDS this bears potential dangers. This becomes most obvious when taking into account that only 14% of girls know that they can get pregnant as a consequence of first sex and only 40% of students know that a healthy looking person can be carrying the AIDS virus.

The students' knowledge on reproductive health and on the transmission and prevention of STIs & HIV/AIDS seems to be limited (see above). Although the rate of correct answers is higher for questions of contraception and STI prevention, there is no reason for assuming that the adolescents are informed well enough in order to protect themselves from the undesired consequences of sexual intercourse. During the focus group discussions held within the framework of the PSM, it became apparent that students' knowledge is very limited and superficial. Due to a lack of certified and easily accessible sources of information, students have a very partial knowledge on the most basic issues of reproductive health (the process of physical maturing, the menstrual cycle, the biological process leading to pregnancy, etc.). In

¹⁶ Girls having passed menarche and being sexually active.

¹⁷ All girls being sexually active, irrespective of physical maturity.

¹⁸ Boys being physically mature and sexually active.

many cases different sources of information seem to have disseminated contradictory messages, which made it virtually impossible for the adolescents to discern the truth.

The partial ignorance of the young people in Lindi region, coupled with the reality of themselves being sexually active bear dangers. Not only the lives of those adolescents are potentially threatened, but also a high social cost can result from the "mixture of not knowing but doing". Girls are prone to become pregnant at an early age, which hinders them from continuing their education and put a health hazard on them (complications during labour due to small pelvis, fistulae, and in the worst case infertility or death). The adolescents, both boys and girls are exposed to STIs (including HIV/AIDS) which increases medical costs in the household budget if treated and potentially leads to infertility if not treated. Last, but not least, the adolescents can potentially become infected with HIV/AIDS.

This chain of arguments is more than enough for pleading for action. The adolescents should no longer be forced to acquire their sexual and reproductive health knowledge on the basis of "trial and error". Special attention needs to be paid to male education, as their common behavioural pattern bears a lot of risk for themselves and peer pressure of having sex is strong. Providing the young people with information is a positive contribution to promoting their human rights and an adequate tool for assuring that they can grow up safely.

6.2 Institutional Set-up & Methodology

The fact that a large proportion of Lindi's youngsters are **currently** sexually active, but do not have the knowledge, nor the means to protect themselves from the undesired consequences of sexual activity, calls for immediate action. It is therefore recommended to start with an intervention, which does not necessitate complicated administrative procedures and the set-up of a permanent and strong institutional structure (strongly staffed project offices, etc.). What is necessary, is a committed action in favour of young people.

It does not seem to be feasible to recommend a school-based Information Education and Communication (IEC) intervention for several reasons. Firstly, there is a certain percentage of children who never get the chance of attending school. Secondly, by far not all students enrolled in Standard I finally reach Standard VI, as many of them drop out of the school system at different levels and for different reasons. Thirdly, even among those enrolled the attendance is quite low (see chapter 4.1). 38.5% of students registered at the schools chosen for this survey¹⁹ could not be encountered on the day the school was visited. Finally, the age range of students within Standard VI is very broad. A narrow age range would be a favourable argument for a school-based intervention, because it would make it easier to specifically target a chosen age group. The age range being broad, there is no comparative advantage of remaining within the school setting.

It is therefore recommended to go for a "lean" and community based IEC intervention. A potential realisation of such a programme could involve a mobile information desk, which visits the villages in a predetermined schedule. The mobile information desk could take the following shape:

- A 4x4 vehicle
- A sufficient number of committed staff, i.e. four ARH youth workers (two male, two female) one of which is the co-ordinator of the programme²⁰, one driver. The team members need to have a background in working with adolescents in the field of ARH, they must be ready to take up the challenge of extensive fieldwork, and they have to be personally committed

¹⁹ According to the lists provided by the educational authorities.

²⁰ The task of the co-ordinator is a double one of implementing activities and at the same time overseeing the activities in order to assure that the procedures follow the underlying concept of the intervention.

- to the adolescents of Lindi region. This mobile team must be given all back-stopping and supervision necessary, in order to successfully complete its task.
- An information kit with separate IEC messages for boys and girls of specific ages. For an initial introduction into ARH the age of the youths should be around 11 to 12 years, as after the majority of students indicate that they started to be sexually active after age 12. It has been proven in other ARH projects that early counselling and provision of information on potential health and social hazard of early sex potentially leads to delaying the onset of sexual activities among adolescents. Another session could be held for those older than twelve years, in order to cover all youths in question.
 - An information kit for the wider community, as especially parents and community leaders must be informed about the procedures and the contents of the IEC intervention. It should become clear that the IEC mission is not about spreading condoms, but about protecting the lives of their children.
 - The transmission of information should take place by using different means of communication: group discussions ("question and answer sessions"), use of existing flipcharts dealing with specific issues of ARH, video performances (if the IEC team stays in the neighbourhood of the villages, videos can be shown in the evening, creating a community event), and many others.
 - As the adolescents are told about where to seek medical assistance in case of pregnancy or being infected with an STI, these referral structures must also be included into the IEC intervention. The staff of those structures must be informed about the intervention and sensitised about the fact that reproductive health services are open to anyone in reproductive age, regardless of sex or age.

The schedule of this mobile unit must be carefully planned, taking into account that the transport infrastructure of Lindi region is very seasonal (rainy season between December and May). In addition, it must be considered that the mobile character of the intervention puts a heavy burden on the IEC team, which should not be underestimated. Intervals of work and rest should be carefully balanced and agreed upon ahead of time. Making changes in the schedule should be avoided as much as possible, in order to facilitate maximum participation of adolescents and in order to reduce friction between the team and the village communities.

If one considers an intervention with a longer-term perspective, the traditional custom of initiation seems to be a very interesting and eventually promising entry point. Firstly, the custom is still widely practised and it has shown reasonable flexibility in the past with regard to adapting to new circumstances²¹. Secondly, the timing of initiation allows profound teaching of adolescents before they enter the "risky phase" with regard to teenage pregnancies or STI infections. Thirdly, the persons responsible for carrying the initiation rites seem to be ready to adapt the contents of what is taught, seeing the reality of an increased incidence of teenage pregnancies and the existence of STIs, especially HIV/AIDS. In order to meaningfully design such an intervention, however, more research into the matter is needed. Such research has to take place within a long-term interaction between researcher(s) and the communities.

²¹ For more information, see separate report on PSM by R.L. Mwateba.

6.3 Contents of an IEC intervention

An IEC intervention, as suggested above should include basic knowledge about reproductive health, as well as about STIs. Within those broader fields, the following subjects should be included:

- The sexual organs of men and women, and their development during the process of maturing
- The menstrual cycle of the girl/woman: explain biological process, explain the meaning of the menstruation, explain about fertile and infertile days within the cycle, explain about menarche taking place at different ages for different girls, explain about menopause, give practical tips to girls about the "dos and don'ts when menstruating", etc.
- Pregnancy: how it is caused, why not all sex leads to pregnancy, explain about the health hazards of early pregnancy, explain about the personal and socio-economic inconveniences of teenage pregnancy, explain about means of contraception
- Knowledge about the most prevalent STIs, including signs, consequences and potential cure
- Special focus on HIV/AIDS, about its origin, the means of transmission, signs and prevention
- Information about medical facilities, which can be contacted for information and services

7. General Recommendations for Future Steps

7.1 *Feedback to People Involved in the Study*

It is of major importance to give feedback to all parties involved in the study. This includes all governmental authorities contacted during the KAP study, all head teachers and teachers of the 48 schools involved, as well as all students who filled the questionnaire.

The authorities and teachers should be given a sample questionnaire and they should be informed about the major findings of the survey. This is to assure transparency and the sharing of information is essential for a common understanding of how to continue. Only on the basis of a consensus on necessary steps to be taken, the implementation of an intervention focused on adolescents in Lindi can become efficient and successful.

The students should be given a short feedback on the correct answers of the questions stated in the questionnaire. This refers especially to questions on pregnancy, contraception, as well as transmission and prevention of HIV/AIDS (questions 6, 7, 17, 18 and 19). Some students have already been provided with such information within the framework of the PSM methods or in short "question and answer"-sessions after the filling of the questionnaires, others may still be in need of clarification. A short "briefing note" could be prepared for the head teacher to share with the students.

7.2 *Suggested Changes to Questionnaire (for Evaluation KAP²²)*

For conducting a similar KAP study after the implementation of an intervention in favour of the adolescents in Lindi, a few recommendations with regard to changes in the questionnaire are presented. Minor changes with regard to lay-out have been already carried out, in order to make the process of answering the questions easier for the students²³.

The question focusing on the circumstances of first sex (being forced or not) could be supplemented by questions one or several of the following questions:

- Have you ever been physically forced to have sex/ have you ever physically forced someone to have sex?
- Have you ever been verbally threatened if not agreeing to have sex/ have you ever verbally threatened someone to have sex?
- Have you ever received presents or money for having sex?/ have you ever given presents and money for having sex?

The answers to these questions would then allow a more comprehensive understanding of different levels of forcing/ encouraging adolescents to have sex and the adolescents' perception of it.

In the same line, the question about the current lover could be complemented by questions about the professional background and/or age of any of the past lovers:

- Did you ever have sex with ...(indicating different professional categories)?
- Did you ever have sex with ...(indicating different age categories)?

²² The government authorities involved in the survey recommended slight changes in the administrative procedures in case an evaluation KAP will be carried out. They suggested to use district data instead of regionally collected data for the calculating the expected number of students. In addition, they asked for a longer time lapse between the announcement and the implementation of the study, as the existing means of communication do not allow reliable/ fast transmission of information.

²³ For the questionnaires slightly modified after being used in this KAP study, see appendices 8 & 9.

This would allow a deeper insight into the entire sample of sexual partners of adolescents involved in the study. On the basis of this, the risk of being infected with STIs and especially HIV/AIDS could be better judged.

In the questions for the opinion poll should be stated removed from the grid, each with a separate set of potential answers. If possible, negative formulations should be avoided. The modified questions and potential answers are listed below:

- Nowadays it is very difficult for girls to remain a virgin till marriage.
Answers: it is difficult , it is not difficult , do not know
- The pill is only for adult women, not for girls.
Answers: it is only for adult women , it is also for girls , do not know
- Condoms are not good for youth because it encourages them to have sex.
Answers: it encourages to have sex , it doesn't encourage to have sex , do not know
- People with AIDS should not be allowed to eat together with the others.
Answers: they should be allowed , they should not be allowed , do not know
- It is very difficult to talk to the parents about sex, love and disease.
Answers: it is difficult , it is not difficult , do not know

Appendices

- Appendix 1: Terms of Reference
- Appendix 2: Training schedule and manual
- Appendix 3: Schedule of survey
- Appendix 4: List of schools visited
- Appendix 5: List of people met during the study
- Appendix 6: Questionnaire English (boys/girls)
- Appendix 7: Guidelines for Questionnaire facilitators English
- Appendix 8: Questionnaire Kiswahili boys
- Appendix 9: Questionnaire Kiswahili girls
- Appendix 10: Guidelines for Questionnaire facilitators Kiswahili

