KNOWLEDGE, ATTITUDE AND PRACTICES CONCERNING SEXUAL BEHAVIOUR IN ADOLESCENTS IN STANDARD SEVEN AND EIGHT IN DAGORETTI DISTRICT

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(THIS DISSERTATION WAS SUBMITTED TO FULFILL THE REQUIREMENTS OF THE UNIVERSITY OF NAIROBI FOR THE AWARD OF THE MASTERS IN MEDICINE IN PAEDIATRICS.)

DEDICATION

I would like to thank God in whom I live, breath and have my being. I would also like to thank my husband Stephen Mwakavi, my parents - Norman Maweu, Peter and Njoki Karianjahi and my sister Josephine Karianjahi for their unwavering support during the course of this research study.

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DECLARATION

This dissertation is my original work and has not been presented for the award of a degree in another institution of learning. References to work done by others have been clearly indicated.

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ABSTRACT

BACKGROUND: Adolescence is the transition period between childhood and adulthood. It is in this transitional period from childhood to adulthood that various health-related behaviours are adopted. One of the behaviours that has proven fatal for adolescents is risky sexual behaviour which first develops in puberty.

OBJECTIVES: The purpose of this study was to determine the knowledge, attitudes and practices concerning sexual behaviour in adolescents in class 7 and 8 in primary schools in Dagoretti district. It was also a secondary purpose of this study to determine the knowledge of teachers and caregivers concerning sexual behaviour in early adolescents and the factors associated with knowledge, attitudes and practices concerning sexual behaviour e.g. family structure, parental education, religion.

JUSTIFICATION: . There is a scarcity of knowledge , attitudes and practices concerning sexual behaviour in early adolescence. The information from this study will be used to develop educational interventions curbing risky sexual behaviour.

RESEARCH DESIGN: This was a primary school based descriptive cross-sectional study.

PARTICIPANTS: This study included 397 students in standard 7 and 8, whose ages ranged from 13 to 17 years, who were enrolled in the four primary schools in Dagoretti district that had been randomly selected. It also included the standard 7 and 8 teachers from these four schools and caregivers with students in these classes.

METHODS: A self administered questionnaire was used for the evaluation of sociodemographic data, knowledge and attitudes of the students in standard 7 and 8 concerning sexual behaviour. The teachers and caregivers of the students in standard 7 and 8 participated in focus group discussions. These were conducted to determine their knowledge concerning sexual behaviour in the adolescents under their care.

RESULTS: Knowledge concerning sexual behaviour was gauged using a possible outcome of sexual behaviour which was HIV/AIDS. Sixty six percent of the students in standard 7 and 8 had good knowledge concerning HIV/AIDS infection and transmission. School teachers and mothers were identified to be an

important source of information for the males and females that participated in this study. Attitudes concerning sexual behaviour were gauged by their views concerning relationships with the opposite sex as well as their attitudes on gender roles. 77% of males and 82% of females had appropriate responses to relationships with the opposite sex, seventy three percent of the males and seventy eight of the female participants had appropriate responses concerning gender roles. In the focus group discussions, teachers noted higher incidences of sexual behaviour in adolescents and at a younger age than caregivers did. It was also noted that socio economic status and environment of the family impacted on exposure to sexual behaviour e.g families living in single rooms.

CONCLUSION: Over 70% of the students in standard 7 and 8 in Dagoretti district have a good knowledge base concerning sexual behaviour as well as appropriate responses concerning their attitudes towards gender roles and relationships with the opposite sex. The knowledge and attitudes can be improved on by supporting the role of school teachers and mothers in the lives of these students while in primary school and should be supported even after the completion of primary school.

BACKGROUND

According to the World Health Organisation, an adolescent is a young person who is between the ages of 10-19 years. The young people aged 10-24 years of age, number 1.8 billion which is 25% of the world's population. Majority of these young people live in low and middle income countries[1]. In Kenya, the population of persons aged 10-14 years is 13.8% of the population while those aged 15-19 years make 10% of the population [2] and these figures are likely to increase. The increase in adolescent numbers worldwide has been postulated to be a result of reduced infant and child morbidity and mortality.[3]

Adolescence is a transitional period between childhood and adulthood. Adolescence is divided into the early, middle and late stages. Early adolescence is seen roughly between the ages of 10 to 13 years of age. Middle adolescence is between the ages of 14-16 years of age and late adolescence is between the ages of 17 to 20 years. The transition from a child to an adult is marked by emotional, cognitive and behavioural changes, as well as sexual and reproductive maturation. Sexual and reproductive maturation leads to the

biological transition called puberty. The age of onset of puberty differs from person to person. It occurs as a result of the stimulation of the hypothalamic-pituitary-gonadal axis. This stimulation is initiated by the gonadotropin releasing hormone (GnRH). Progression of puberty is also brought about by the gonadotropin releasing hormone. This progression is brought about by increased pituitary sensitivity to GnRH, pulsatile release of GnRH, follicular stimulating hormone (FSH) and luteinizing hormone(LH) during sleep and increases in gonadal androgens and oestrogens. The pubertal changes that occur include the development of secondary sexual characteristics, the capacity to reproduce and the growth of the body to an adult size.[4]

The sequence of physical changes has been summarized by the sexual maturity rating scale or the Tanner staging for males and females as follows:

Table 1a. Classification of Sexual Maturity States in Girls[5] (adapted from the Tanner Sexual Maturity Rating)

SMR STAGING	PUBIC HAIR	BREASTS
1	Preadolescent	Preadolescent
2	Sparse, lightly pigmented, straight, medial border of labia	Breast and papilla elevated as small mound; diameter of areola is increased
3	Darker, beginning to curl, increased amount	Breast and areola enlarged, no contour separation
4	Coarse, curly, abundant but less than in adults	Areola and papilla form secondary mound
5	Adult feminine triangle, spread to medial aspect of thighs	Mature, nipples projects areola part of general breast contour

Table 1b. Classification of Sexual Maturity States in Boys[5]

SMR STAGE	PUBIC HAIR	PENIS	TESTES
1	None	Preadolescent	Preadolescent
2	Scanty, long, slightly pigmented	Minimal change/ enlargement	Enlarged scrotum, pink, texture altered
3	Darker, starting to curl, small amount	Lengthens	Larger
4	Resembles adult type but less quantity, coarse, curly	Larger, glans and breadth increase in size	Larger, scrotum darker
5	Adult distribution	Adult size	Adult size

2.1 Stages of Cognitive and Emotional development

Adolescents also undergo cognitive development during this period. Due to biological development and environmental exposure, a progressive organization of mental processes occurs. According to Jean Piaget, cognitive development occurs from infancy all the way to adulthood. There are four stages namely; sensorimotor(birth to 18-24 months of age), preoperational (24 months to 7 years), concrete operational (ages 7-12 years) and formal operational(12 years through to adulthood).[6]

The stages of cognitive development among the school going subjects are in the concrete and formal operational stages. The concrete operational stage of development is the stage where children between the ages of 7-12 years develop logical thinking that is rational and organized. These adolescents are able to apply this thinking or appropriate rules, to physical objects and school assignments but are unable to apply this thinking to personal issues. [7] In the formal operational thinking stage, the child from about 12 years and upwards is able to use the rules learned earlier on to more abstract and creative thinking. They are also able to apply rules to imagine the outcome of various actions. These adolescents are then able to establish a personal code of conduct. The flexibility at this stage may have positive or negative effects on their health and their relationships with self and with others.[8]

Regarding brain development, the dorsolateral prefrontal cortex and the superior temporal gyrus experience accelerated development during adolescence. These areas are responsible for the ability to inhibit impulses, control thoughts and behaviour, self awareness[9] and the ability to understand the beliefs and opinions of others.[10]During this maturation process, the adolescents may experience an increase in emotional intensity. They have also been noted to seek experiences that heighten their emotions. These actions may have negative effects on their health and their relationships with self and others.

It is in this transitional period from childhood to adulthood that various health-related behaviours are adopted. Some of these behaviours persist into adulthood. One of the behaviours that has proven fatal for adolescents is risky sexual behaviour which first develops in puberty[11]. This has led to an increase in unwanted pregnancies, abortions, complicated deliveries, low birth weight deliveries, sexually transmitted diseases e. g HIV etc. All these effects of risky sexual behaviour among a constantly growing adolescent population, has impacted negatively on the achievement of the millennium development goals. Unless major effort is put on improving sexual and reproductive health for adolescents, the reduction of child mortality rates, improved maternal health and combating HIV/AIDS will not be achieved.[12]

LITERATURE REVIEW

Sexual and Reproductive Health in adolescents

One in every eight births in developing countries occurs among girls aged fifteen to nineteen years of age[13]. It has also been reported that 25 % of all unsafe abortions in the world, are procured by girls aged 15-19 years of age[14]. In addition to that, HIV is the 6th leading cause of death in people aged 10-24 years and over 50% of people living with HIV live in sub-Saharan Africa[15]. A lot of the studies on sexual and reproductive health and the factors that affect this area have been carried out among adolescents aged 15 years and above.

A study done in high schools in Nairobi revealed that 11% of females and 50% of the males had engaged in sexual activity. This study also revealed that the median age of first intercourse was 15 years for females and 13 years for males.[16] The increased likelihood of sexual activity has been associated with male gender[17], low

social economic status especially for females[18]and low parental supervision .[19]The likelihood of early onset sexual activity has been noted to decrease with adolescents who live with one or both parents compared to those who live with non-relatives[16,19]. Sexual activity was also noted to have a correlation with school attendance with higher rates of sexual activity in those out of school. Besides the family, school plays an important role in socialization of adolescents and has an effect on behaviour and attitudes that adolescents undertake. Gender ideology governs attitudes and behaviour and is an important mediating factor in sexual and reproductive behaviour (Varga, 2003). A lot of the time these gender ideologies are reinforced in the school setting. Schools typically represent the most important socialization setting outside of the family and are a potentially important contextual factor influencing sexual behaviour.[20]There is scarce information on sexual and reproductive health of early adolescents.[21]

Delaying sexual debut is one of the ways that would positively affect the sexual and reproductive health of all adolescents. In Kenya, according to the Kenya Demographic Health Survey, the average age of sexual debut in females is 18.2 years and 17.6 years in males[2]. A survey based study that had been conducted in a slum in Nairobi showed that when a father lived in the same household as his never-married 12-19 year old daughters, there were less likely to have recently been sexually active, to have had an unwanted pregnancy, or to have ever had sex than when neither parent or only the mother lived in the household.[31]

However, defining the sexual debut in itself does not shed light on respondents' knowledge or attitudes concerning sexual behaviour. A study done in Burkina Faso, Ghana, Malawi and Uganda revealed that almost one third of very young adolescents aged 12-14 years were not sexually naïve. It also revealed that 7-34% of the participants had experienced some form or other of sexual intimacy (kissing, fondling, intimacy). 11- 53% of the participants also reported to have a friend who has had sex. It was also demonstrated that although the awareness of sexually transmitted infections like HIV was high, the in-depth knowledge about transmission and prevention was low[21]. This is likely to leave them exposed to the risk of early HIV acquisition.

The ability to make healthy life choices has been positively influenced by formal education. There has been a positive association between protective behaviours and formal education of adolescents.[22] It is important

to note that due to the advent of free primary education in Kenya, the school attendance rate in 11-15 year olds is 95%. This rate significantly drops in 16-20 year olds at 64.9% attending secondary school.[2] It has been proposed that early educational intervention improving knowledge and attitudes concerning sexual behaviour in early adolescents could further delay sexual debut in adolescents and have positive impact in sexual and reproductive health. There is evidence that comprehensive, age- appropriate educational interventions do not lead to increased sexual activity among adolescents.[23] Being equipped with knowledge of what early adolescents already know concerning sexual behaviour would greatly facilitate the development and successful implementation of an age appropriate and relevant educational intervention. This study was undertaken to shed some light on early adolescent knowledge and attitudes on sexual behaviour.

A study done in Jamaica in which focus group discussions were conducted among adolescent boys and girls age 10-19 years revealed that some of the motivating factors for early adolescent sexuality were poor economic conditions, peer pressure and gender inequality.[29] Another study done in the Fiji Islands using focus group discussions among 15-20 year old males and females revealed that sexual activity was believed to be common among their peers and that it began at an early age. This group of participants also demonstrated good knowledge concerning HIV and AIDS infection and transmission. The information on HIV was mainly from print media and films. It was interesting to observe that the participants felt that parents did not know any more than their children did concerning reproductive health.[30] A study done in Lesotho that used focus group discussions with parents and teachers revealed that although both groups were aware that adolescents are involved in sexual relationships, most parents felt that their adolescents were too young to initiate in sexual activities. A majority of the parents reported that they did not discuss sexual matters with their adolescent children. Participants of this study felt that sexual and reproductive health education should be introduced into the curriculum. They also felt the responsibility of teaching on this topic should be given to teachers.[27]

JUSTIFICATION

It is during early adolescence that physical, emotional, hormonal and psychological changes begin to occur. It is in the process of these changes that adolescents are in danger of engaging in risky sexual behaviour with the risk of acquiring HIV/STI and getting pregnant. Information concerning sexual behaviour e.g sexual debut and the outcomes of sexual behaviour e.g HIV/AIDS infection is available in numerous studies and demographic health surveys but is primarily derived from older adolescents aged 15 years and above. There is a scarcity of knowledge, attitudes and practices concerning sexual behaviour in early adolescence. The information from this study will be used to develop educational interventions curbing risky sexual behaviour.

RESEARCH QUESTIONS

1. What do male and female adolescents in standard 7 and 8 know concerning sexual behaviour and what is their source of information?

2. What attitudes affect the choices that standard 7 and 8 males and females make concerning sexual behaviour?

3. Are there any standard 7 and 8 involved in any practices concerning sexual behaviour?

4. What do parents and caregivers know concerning sexual behaviour in early adolescents?

OBJECTIVES

Primary Objective:

1. To describe the knowledge, attitudes and practices concerning sexual behaviour in adolescents in class 7 to 8 in primary schools in Dagoretti district.

Secondary objectives:

1. To describe the knowledge of teachers and caregivers concerning sexual behaviour in early adolescents.
2. To describe the factors associated with the knowledge, attitudes and practices concerning sexual behaviour of early adolescents. Potential factors include religion, family structure, parental education, the school environment e.g. teachers.

STUDY DESIGN AND METHODOLOGY

Study design

The study was a descriptive cross-sectional study to determine what knowledge, attitudes and practices concerning sexual behaviour in adolescents in standard 7 and 8 are.

There was a self administered questionnaire which was filled in by student participants. Focus group discussions were also conducted with caregivers and teachers of early adolescents.

Study Area Description

Dagoretti is located on the western side of Nairobi County and constitutes both rural and urban locations. Administratively the area has 2 constituencies and has a population of approximately 240,509. The poverty level has been estimated at 45% of the population in the area. Twenty two public primary schools are run by the Nairobi City council located in Dagoretti district.

Study Site and Population

The study was carried out in four primary schools in Dagoretti district.

School	Students enrolled in Std.7 at the time of the study	Students enrolled in Std.8 at the time of the study	Number of teachers teaching Std.7 and Std.8 students at the time of the study.
Jamhuri Primary School	130	140	8
Ndarurua Primary School	130	165	9
Kawangware Primary School	210	250	10
Riruta Satellite Primary School	330	360	8

Study Period

This study was conducted in the month of January, 2014.

Participant Selection:

Inclusion Criteria

1. Both male and female adolescents were eligible for inclusion.
2. The adolescents were enrolled, in standard seven and eight, in one of the four public primary school at the time of the study.
3. The caregivers of adolescents enrolled in standard 7 and standard 8 in the selected primary school at the time of the study.
4. The teachers of adolescents enrolled in standard 7 and 8 teaching in the selected primary schools at the time of the study.

Exclusion Criteria

1. The adolescents who were not enrolled in primary school and not present in school at the time of the study.

Sample Size

This was done using Fischer's method of calculation. It was as follows:

$$\mathbf{n = \frac{Z^2 p\,(1-p)}{d^2}}$$

n = the sample size

Z= standard normal deviate corresponding to 95% confidence interval =1.96

p = the estimated prevalence (50%) This is taken as 50% since no antecedent studies exist.

d = the margin of error (5%)

$$\mathbf{n = \frac{1.96^2 * 0.5(\,1-0.5)}{0.05^2}}$$

n =384

Sampling Method

Dagoretti district has 22 public primary schools as described above. By simple random sampling method, 4 schools were selected to participate in the study out of the total twenty two primary schools. The schools that participated were Jamhuri Primary School, Kawangware Primary School, Ndarurua Primary School and Riruta Satellite Primary School.

A teacher from each school was assigned as a study coordinator for that particular school. It was the responsibility of the study coordinator to help in carrying out the stratified random sampling under the instruction of the principal researcher as well as act as a liason between the school administration and the principal researcher, and the principal researcher and the caregivers. In each school, 150 students from standard 7 and 8 were approached to participate in the study. Out of the 150 students per school, there are

some whose caregivers declined to give consent to participate in the study while there were others who misplaced their signed consent forms. The number of 150 catered for these forseen deficits in number so as not to fall short of the total number of 384 that was required for the study. In each school, stratified sampling of male and female participants was done to reflect the male to female ratio of adolescents in standard 7 and 8.

The study coordinator had instructions to have 150 folded pieces of paper equal to the students in standard 7 and standard 8 which had 'yes' in the ratio representing the girls and boys in both classes and 'no' to represent the difference . The boys and girls were separated and each group picked from the folded pieces of paper. Those who received a 'yes' were then given consent forms to be filled in by their caregivers. The study had been explained well to the principals and to the study coordinators in case any of the parents or caregivers had any questions and required any clarification.

Of those whose caregivers gave consent, assent was sought and thereafter, they took the self administered questionnaire.

Out of the 70 to 120 caregivers who were willing to voluntarily participate in the focus group discussions, 4-8 were randomly selected to participate in the focus group discussions. The study coordinator communicated with the caregivers of those who gave consent for their children to participate and invited 8 of them to the focus group discussions. Out of the teachers of standard 7 and 8 students, those who were available in school and willing to voluntarily participate were invited for the focus group discussions.

DATA COLLECTION PROCEDURES

Recruitment and Consent Procedures

Ethical approval was received to proceed with the study from the Ethics Research Committee of the Kenyatta National Hospital. The ethical approval was then used to seek the permission of the National Commission for Science, Technology and Innovation (NACOSTI) to embark on this study in primary schools in Dagoretti District, Nairobi County. This organization issued a license to conduct the study in Nairobi County. With this license and a letter of ackowledgement from NACOSTI, approval from the

County Commissioner and the County Director of Education to conduct my study in Nairobi County was gotten. The District Education Office issued the principal investigator with an introductory letter which was presented to each school participating in the study.

With the letters of introduction, the school principals in each school were approached during school hours. The research team was introduced to the the school principals and each school was given a copy of the letter of introduction from the District Education Office. The study was also explained to them and all the schools were receptive to the study. Each principal assigned a teacher who taught standard seven and standard eight classes to help with the planning and execution of the data collection. These teachers became voluntary study coordinators. Each study coordinator was briefed on the study and organized the preparation of the rooms in which the questionnaires were to be done and where the focus group discussions were to be held.

The study coordinator informed the students of a study that was to be conducted in school during school hours and that each of them was to take a consent form with more details home to their caregivers for their reading and signature. It was made clear that the participation in the study was voluntary with no negative repercussions should the caregiver decide that their child was not to participate. Incase of any queries or concerns, the caregiver was directed to speak with the study coordinator for any clarification. If the study coordinator was not able to assist them with their queries or concerns, the principal investigator was available to respond to the caregiver, by email, phone or in person. The students were instructed to return the consent forms within 48 hours of having received the consent form. The consent forms were distributed to the students under the directive of the principal investigator and were collected after being filled in. The study coordinator also informed the research team on the number of students expected to participate in the study, as well as the caregivers and teachers who had been informed and who had given their consent to participate.

The consent for participation for teachers was acquired in school by the principal investigator after the study had been introduced and explained to the teachers who taught standard seven and eight. From those caregivers who gave consent, the study coordinator randomly selected eight of them whom she called to request them to come to school to participate in the study.

One male and one female research assistant were selected one month prior to data collection. The research assistants were introduced to the questionnaire, the consent and the assent forms. This was to ensure that they were clear about the content of these documents so that they could assist the principal investigator if any queries were raised in the field. There were some theoretical sessions on focus group discussions as well as some practice sessions using role play. This was with the intention of the research assistants gaining confidence in their ability to conduct the focus group discussions. This was also to help them understand their roles in these discussions clearly.

RESEARCH INSTRUMENTS

The Questionnaire

The questionnaire was adapted from the Illustrative Questionnaire for Interview-Surveys with Young People by John Cleland and the questionnaire used by Kabiru C. W concerning sexual behaviour in Kenyan High schools. This tool was designed to be suitable for teenagers and young people for the purpose of documenting knowledge, beliefs and behaviour in the area of sexual health.[24]

The questions covered the social, demographic status, relationships, attitudes, risky health behaviour observation and involvement, if any, of the early adolescents who participated in the study.

A pilot which involved five people in the same age group as the students in standard 7 and 8 was used to test the questionnaire before it was administered to the participants of the study. After receiving consent from the caregivers, assent from the students themselves, the questionnaire was then administered to the students in standard seven and standard eight who had been selected for the study. The questionnaire was only administered to the students whose parents had given consent for their children to participate in the study. Each school had allocated a venue and an hour during school hours for the selected students to do the self administered questionnaire.

In order to limit bias, no caregiver or teacher was given the questionnaire to look at before it was given to the students. No student was given the questionnaire before the assigned time. The instructions on how to fill the questionnaire were printed on the questionnaire as well as read out aloud for the students before they

began to fill in the answers. It reduced bias by presenting the questions to the participants in a uniform manner. The investigator's opinion did not influence the respondent's answer as the tool was self administered. The questionnaire was also a cost effective way to collect data from a large sample size.

Focused Group Discussions

The focus group discussions included 4 to 8 of the caregivers of participants that had been randomly selected from each participating school in the study. The focus group discussions were also conducted with teachers of early adolescents. The school allocated 45 minutes during break time for the teachers to be allowed to participate in the focus group discussions. This was the only time the teachers of standard 7 and 8 were all available. The parents were allocated the same amount of time thirty minutes after completion of focus group discussions with the teachers.

For both groups, the schools allocated rooms at the farthest corner of the school where the discussions could be held confidentially and freely. The focus groups had 4-7 participants each. When they arrived in the room, they were welcomed and introduced to the research team.

The chairs were arranged in a circle and all participants were seated in the same fashion. A number was allocated to each participant, from number 1 to number 8.When all participants were settled, the group was given some ground rules. All phones were to be put on silent, there was to be no use of names and they were only to regard each other by the numbers allocated to them, they were to speak one person at a time, they were to speak clearly and not interrupt when someone else was speaking. This was for the purpose of clear recording of the discussion. It was also emphasized that there were no right or wrong responses and that each participant was to respect the opinions of the other.

After ensuring that the group understood the ground rules, the weather and the harvest of different delicious fruits were discussed as a way to break the ice. Once everyone had given their thoughts for about five minutes, the dictaphone was switched on and began the session. One of the research assistants was the time keeper and the other was taking dictation of the discussion. The discussions were guided by an interview guide that contained five questions. Each question was answered in an orderly fashion and all participants were encouraged to actively participate by giving their opinion. With the consent of the

participants, the focus group discussions were recorded on dictaphone and notes of the conversations were transcribed from the recordings.

The focus group discussions facilitated direct interaction with some of the participants of the study. The forum allowed the investigator to get clarification concerning their understanding of sexual behaviour and the observations they have made concerning the same in early adolescents. As participants used their own words, as well as their non verbal communication, they gave a better aspect of understanding early adolescents from the perspective of a caregiver or a teacher.

Data Security

The questionnaires filled were individually checked to ensure that they did not contain personal identifiers in order to protect confidentiality of the study subjects. Any personal identifiers were removed. The questionnaires were safely locked in a cabinet that was only accessible to the principal investigator and the research assistants. The recorded focus group discussions were saved on a password protected laptop and protected external hard drive, as well as compact discs that were safely locked in a cabinet. These recordings were only accessible to the principal investigator and research assistants.

Data Storage

The recordings of the discussions held were backed up on compact discs and on a pass-word protected laptop. The compact discs and external hard drive were password protected and only accessible to the principal investigator and the two research assistants. The questionnaires were and are still locked in a cabinet whose key is only accessible to the principal investigator and the research assistants. This was to protect the participants of the study and the information gained.

Data Analysis

Data analysis of the questionnaires was done using the Statistical Package for Social Sciences (SPSS version 16.0.2). Descriptive coding was used to illustrate the demographic information gathered during the study. The responses given during the focused group discussions were analysed using Alan Bryman's stages of qualitative analysis. Validation strategies for this study included the following:

The qualitative and quantitative data combined were used to give corroborative evidence concerning sexual behaviour in adolescents in standard seven and standard eight.. This was the method of triangulation.

Dissemination Plan

Once the data collection and analysis was complete, the findings were shared with the Department of Paediatrics and Child Health. The results of the study will be shared with the students, teachers and caregivers. Once the results are shared, feedback concerning the data will be sought. The findings of the study will be shared with Department of Child and Adolescent Health. This would be to aid with their planning and strategy formulation concerning sexual behaviour in adolescents.

ETHICAL CONSIDERATIONS

1. Permission to conduct this study was obtained from the Ethics Research Committee of Kenyatta National Hospital, The National Commission for Science, Technology and Innovation, The Nairobi County Commissioner, The Nairobi County Director of Education, The District Education Officer and the school administrations.
2. The nature of the study was explained to all the participants.
3. The study was undertaken after written consent was obtained from the caregivers of respondents and teachers in each school.
4. The questionnaires were issued after the adolescent participants gave their assent to participate in the study.
5. It was clarified to all participants that participation was voluntary and they were free to withdraw from the study at any stage without penalty.

6. This study did not cause harm to the participants.
7. The school counselors had been informed of the study and were placed on standby to intervene in case any harm or risk was discovered concerning any of the respondents during the course of the study.
8. Confidentiality was maintained at all stages of this study.
9. Results of the study will be availed to the Ethics Committee of Kenyatta National Hospital, The Department of Paediatrics and Child Health, College of Health Sciences, University of Nairobi.

Data Retrieval and Disposal

After the analysis of data is complete, the audio files and the questionnaires will be destroyed after five years post-collection of the data and analysis , to maintain the confidentiality of participants even after the study is over.

RESULTS

During the month of January, 2014, a total of 397 adolescents in standard 7 and 8, 30 teachers and 20 caregivers from 4 public schools in Dagoretti District, Nairobi County, were recruited to participate in this study. The findings of the analysis of child and caregiver characteristics are presented in table 1 and Table 2 respectively.

PARTICIPANT CHARACTERISTICS

The average age of the participants was 13.9 years (SD 0.99). The age of the student participants ranged from 13 to 17 years. 78.9 % of the student participants were 13-14 years of age while 21.1% were 15-17 years of age.The distribution of respondents in class 7 and 8 was 48.2% and 51.8%. One-half of the participants were Catholics and 40.3% were Protestants. A total of 252 (63.5%) children reported that they were living with both parents, 29% were living with one parent and 7.6% were living with one relative. These sociodemographic characteristics are summarised in Table 2.

Table 2: Characteristics of the adolescents in the study

	Number (N)	Percentage (%)
Age		
13-14 yrs	313	78.9
15-17 yrs	84	21.1
Gender		
Male	175	44.1
Female	222	55.9
Current Class		
Std 7	191	48.2
Std 8	206	51.8
Religion		
Catholic	205	51.6
Muslim	15	3.8
Protestant	160	40.3
No religion	17	4.3
Child living with		
Both parents	252	63.5
One parent	115	29
Relative	30	7.6

Table 3: Marital status of Parents of Adolescents Participating in the Study

	Number (N)	Percentage (%)
Married	283	71.3
Single	40	10.1
Divorced	13	3.3
Separated	43	10.8
Widowed	18	4.5

Table 4: Parental Education and Employment Status

	Father N(%)	Mother N(%)
Education		
Did not go to school	10 (2.5)	15 (3.8)
Primary School	45 (11.3)	53 (13.4)
Secondary School	70 (17.6)	105 (26.4)
Vocational School	65 (16.4)	5 (1.3)
Training College	108 (27.2)	65 (16.4)
University	99 (24.9)	84 (21.2)
Not Sure/ I don't know	-	70 (17.6)
Employment		
Has a job	201 (50.6)	165 (41.5)
Self Employed	108 (27.2)	115 (29)
Retired	10 (2.5)	11 (2.8)
Temporary Employment	21 (5.3)	16 (4)
Unemployed	57 (14.4)	90 (22.7)

PARENTAL ATTRIBUTES

As Shown in Table 2 and 3, 71.3% of the adolescents reported that their parents were married, the remaining 29.7% were either single, divorced, separated or widowed. Most fathers (27.2%) attended a training college while most mothers (26.4%) had secondary school level of education. Concerning employment, 50.6% of fathers and 41.5% of mothers were formally employed.

KNOWLEDGE CONCERNING SEXUAL BEHAVIOUR

An eleven item section assessed the participant's knowledge concerning activities that put people at risk of infection and transmission of HIV (see appendix 6, pg. 62) The average score was 6.9 out of 11. A score of 6 and above was considered to be a moderate knowledge. This was appropriate for the participants' age, level of understanding and education.

Table 5: Knowledge and Participants' Characteristics.

	Participants	Mean(out of 11)	Standard Deviation	P Value
Knowledge Score	397	6.9	2.1	-
Sex				
Male	175	6.8	2.3	0.384
Female	222	7.0	1.9	
Class				
Seven	191	6.7	2.4	0.050
Eight	206	7.1	1.8	
Religion				
Catholic	205	6.8	2.1	-
Muslim	15	6.9	2.0	
Protestant	160	7.0	2.1	
No religion	17	7.3	1.6	
Child living with				
Both parents	252	6.8	2.1	0.584
One parent	115	7.0	2.1	
Relative	30	7.2	2.0	

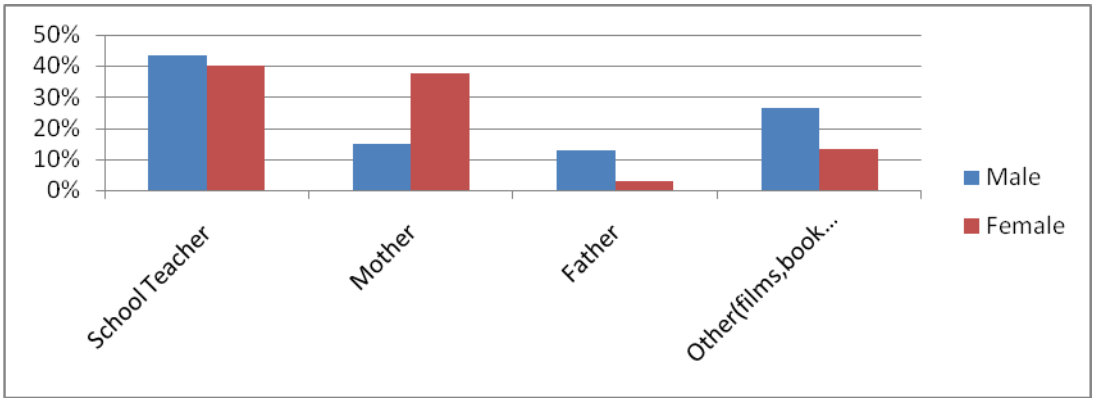
The participants' class was the only significant characteristic associated with knowledge. This could be because of the level of understanding and school curriculum which would favour the class 8 participant over the class 7 participant.

In addition to knowledge, the participants' important sources of information were also sought.

Table 6: Sources of information

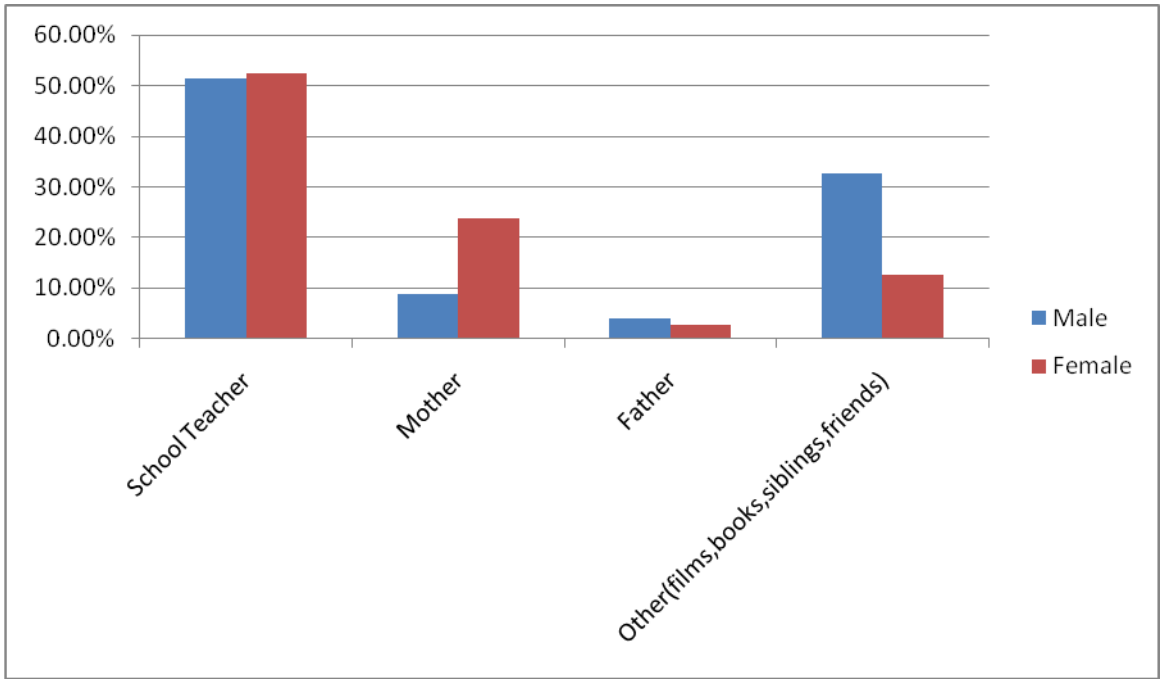
Important Sources of Information concerning	School Teacher N (%)		Mother N (%)		Father N (%)		Others N (%)	
	Male	Female	Male	Female	Male	Female	Male	Female
Body Changes	73(43.2)	89(40.1)	25(14.8)	83(37.4)	22(13)	6(2.7)	46(26.3)	29(13.1)
Sexual Reproductive Health Systems	87(51.5)	116(52.3	15(8.9)	53(23.9)	7(4.1)	6(2.7)	57(32.6)	28(12.6)
Relationships between boys and girls	61(36.1)	85(38.3)	23(13.6)	50(22.5)	25(14.8)	5(2.3)	57(32.6)	65(29.3)

Bar Graph 1: Important Sources of Information Concerning Body Changes



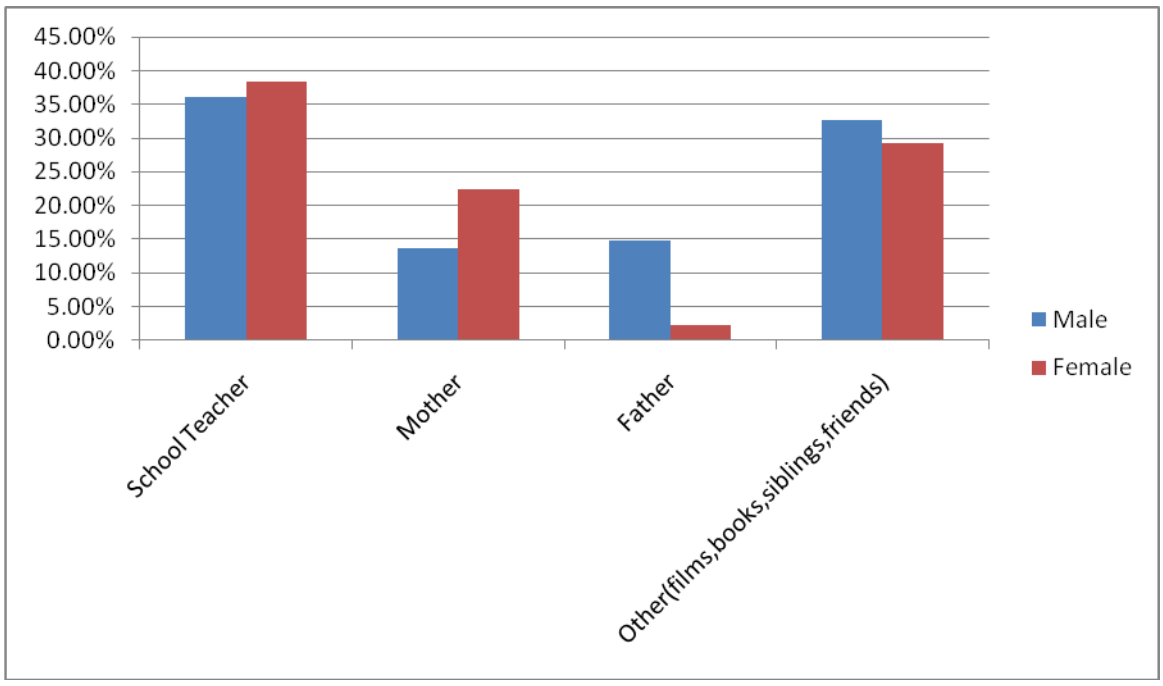
The most important source of information for male and female adolescent participants was demonstrated to be school teachers, with 43.2% for males and 40.1% for females. For the female participants, mothers were noted to be another important source of information at 37.4% while for males, it was noted that it was from books, films, siblings and/ or friends at 26.3%. It is important to note that fathers speak more with their sons(13%) than their daughters(2.7%) concerning body changes.

Bar graph 2: Important Sources of Information Concerning Sexual Reproductive Health Systems



School teachers were noted to be the most important source of information concerning sexual reproductive health systems for both males (51.5%) and females (52.3%). The second most important source of information for females was mothers (23.9%) and for boys were films, books, siblings and/or friends (32.6%).

Bar Graph 3: Important Sources of Information Concerning Relationships Between Boys and Girls



The most important source of information concerning relationships between boys and girls was school teachers for both males (36.1%) and females (38.3%). The second most important source of this information is mothers for females (22.5%) and books, films, siblings and/or friends for males (32.6%).

The most important source of information in all three categories were school teachers. It is important to note that mothers were considered an important source of information to the female student participants as compared to the male student participants. For the male student participants, other sources of information e.g films, books, siblings and friends were considered a more important source of information than mothers. Although in all three categories fathers were a more important source of information for male more than female student participants, they were noted to be the least important source of information when compared to school teachers, mothers and other sources.

Table 7: Association between knowledge score and sources of information

	N	Mean Score	Standard Deviation
Sources of info concerning body changes			
School Teacher	163	7.0	2.0
Mother	110	7.1	2.1
Other	106	6.8	2.2
Sources of info concerning sexual and reproductive health			
School Teacher	207	7.1	1.9
Mother	70	7.0	2.0
Other	98	6.9	2.2
Sources of information concerning relationships between boys and girls			
School Teacher	148	7.1	2.0
Mother	73	7.3	1.8
Other	155	6.8	2.1

It was noted that sources of information may have had an impact on the mean scores of the test but the impact was not statistically significant.

Table 8: Knowledge score performance by class and gender

	Above Average N(%)	Below Average N(%)	Standard deviation	P value
Class				
Standard 7	118(61.8)	73(38.2)	1.00	
Standard 8	142(68.9)	64(31.1)	1.37	0.135
Sex				
Male	107(61.1)	68(38.9)	1.00	
Female	153(68.9)	69(31.1)	1.37	0.106

61.8% of standard 7 participants and 68.9% of standard 8 participants scored above average. This slight variation is not statistically significant (p value=0.135). This slight difference may be as a result of the fact that the senior class are more academically advanced than the standard 7. A higher percentage of female adolescent participants (68.9%) scored above average compared to male adolescent participants (61.1%). This difference was not statistically significant (p value=0.106).

ATTITUDES CONCERNING SEXUAL BEHAVIOUR

Adolescent attitudes on gender roles were assessed from a fifteen item segment. 10 appropriate responses out of 15 was considered to be a good score, less than 10 is a poor score.

Table 9: Attitudes on gender roles

	Appropriate N (%)	Inappropriate N (%)	Standard Deviation	P value
Class				
Std 7	136(71.2)	55(28.8)	1.00	
Std 8	165(80.1)	41(19.9)	1.63	0.04
Sex				
Male	128(73.1)	47(26.9)	1.00	
Female	173(77.9)	49(22.1)	1.30	0.27

Attitudes were also gauged by their views on relationships between boys and girls. This was done through a ten item segment. 7 out of 10 appropriate responses was considered to be a good score, less than this was considered a poor score.

71.2% of standard 7 adolescents were noted to have appropriate responses concerning relationships versus 80.1% of standard 8 adolescents who also had appropriate responses. This was noted to be statistically significant with a P value of 0.04. Females were also noted to have a higher score (77.9%) of appropriate responses concerning relationships compared to their male counterparts but this was not statistically significant.

Table 10: Attitudes on Relationships with the Opposite Gender

	Appropriate N(%)	**Inappropriate N(%)**	**Standard Deviation**	**P value**
Class				
Std 7	147(77)	44(23)	1.00	
Std 8	169(82)	37(18)	1.37	0.211
Sex				
Male	135(77.1)	40(22.9)	1.00	
Female	181(81.5)	41(18.5)	1.31	0.282

82% of standard 8 adolescents showed an appropriate response to gender roles as compared to 77% of standard 7 adolescents. This could be as a result of the syllabus that is taught to the two classes as well as the information imparted to standard 8 students before they proceed to high school or during rites of passage ceremonies. Females were noted to show a higher score of appropriate responses (81.5%) versus their male counterparts (77.1%). Neither of these factors is statistically significant.

PRACTICES CONCERNING SEXUAL BEHAVIOUR

Ethical considerations limited the line of questioning. No direct questions about participation in sexual intercourse were asked. The practices asked about included hand holding, kissing, hugging and involvement in a romantic relationship with a member of the opposite sex.

Table 11: Practices among Std 7 and 8 adolescents in Dagoretti

		Male N (%)	Female N (%)
Ever had a boyfriend or girlfriend	Yes	57 (33.7)	50 (22.5)
	No	118 (66.3)	172 (77.5)
Currently have a boyfriend or girlfriend	Yes	39 (22.3)	31 (14)
	No	136 (77.7)	191 (86)
Have had physical involvement with boyfriend or girlfriend e.g. kissing, holding hands and hugging	Yes	53 (30.3)	38 (17.1)
	No	122 (69.7)	184 (82.9)

It is noted that adolescent males (33.7%) in std. 7 and 8 have been involved in relationships more than their female counterparts (22.5%). The males (30.3%) have been involved in kissing, hand holding and hugging more frequently than their female counterparts (17.1%). This could be as a result of over reporting of the male participants and underreporting of the female participants.

FOCUS GROUP DISCUSSIONS

Caregiver and teacher focus group discussions were held separately in each school that participated in the study. This gave a total of eight focus group discussions that were held for the purpose of this study. The caregivers who participated were four to eight in number, while the teachers were seven to ten in number.

When the teachers and caregivers were asked to describe sexual behaviour that they had noted in adolescents, the participants were not very comfortable when talking about this particular subject matter. The word 'sex' was replaced with words and phrases like '*tabia mbaya'(bad manners),*

'misbehaviour','doing it', 'the act'. It is possible that the cultural background considers it to be a taboo to discuss sexual matters.

When asked about the age at which they noted adolescents to be aware or be involved in sexual behaviour, school teachers noted that it occurred as early as five to nine years of age. This was demonstrated to them by various students in school who either asked questions concerning kissing and fondling or when some teachers observed children of the opposite sex showing each other their undergarments. Caregivers noted awareness or sexual activity in students aged ten to twelve years. This was demonstrated in how adolescents behaved in the neighbourhood e.g. boys and girls holding hands, observing some adolescent girls having intimate relationships with older men. The teachers were noted to report a higher incidence of observed sexual behaviour compared to caregivers. This could be because teachers overall spend more time with these adolescents in a day due to the school curriculum compared to caregivers.

Another question that had been posed was what the adults had noted influenced this exposure to sexual behaviour at the ages that they had stated above. Caregivers and teachers were of the opinion that the environment and socio-economic status of a family affected how early an adolescent became aware of sexual behaviour. Some of the comments made included;

Caregiver: '*...mahali tunaishi kwa slum,nyumba ambaye ni single...ni room moja na watoto wako pale ndani na wameanza kuwa watu wakubwa. Wanaingia vitu hivi kutoka sisi...'(we live in a single room in the slum and share this room with children who are growing. They learn these things(sexual behaviour) from us...)*

Teacher: ''*...and then just in the neighbourhood again. The loose morals that are there...so these students when they are umm they are at home, you can't stop them from seeing things...'*

Caregiver: '*...tena inategemea na mzazi. Kuna wale wazazi wanajiweza a kuna wale wako very poor. Kwa wale wanajiweza wanawaonyesha watoto wao pesa. Sasa inabidi hao hawajiwezi wanabidi wanang'ane kuenda kufanya sex ili wapate pesa pia...'(It depends on the parent. There are those who are rich, there are*

those who are poor. The rich can expose their children to money. The poor on the other hand have to get work, using sex as a way to get money…)

Living in single rooms exposes the younger members of the family to sexual behaviour at a very young age. This was noted to stimulate their curiosity and there had been incidences where some of the younger students were lying on top of each other in the school field as they had observed at home. Many caregivers were involved in socio economic activities that had long working hours. This would leave some of the adolescents to watch television programs, pornographic films in nearby kiosks, read books, magazines, that exposed them to sexual behaviour. Some of the socio- economic activities e.g. prostitution that caregivers were involved in would expose some of the adolescents to sexual behaviour early.

When asked when people should start talking to children concerning sexual behaviour the responses varied. The teachers felt that conversations should be started as early as possible at the level of understanding of the child. The parents felt that the conversation should be started from the age of ten years onwards or when the secondary sexual characteristics begin to show e. g the breasts developing**.**

Caregiver: '*…slightly before they show those sexual developmental features…just a …a year earlier. So that wakati aingie kwa hiyo umri, atleast ako aware.'(So that when he/she reaches that age, he/she will be aware)*

Teacher: ' *…as long as child knows how to talk, how to speak, and he can eeh…express himself, you need to start talking to that child…talk to him in relation to his age so that when you talk to him he should understand.'*

When asked who would be in the best position to speak to adolescents concerning sexual behaviour, majority of the caregivers and teachers stated that the person best suited would be the caregiver. Some of the participants felt that the team work of caregivers and teachers is a good support system when speaking to children concerning sexual behaviour.

Parent: '*Parent and teacher. It has to be combined. Otherwise you do it here and not do it at home, they will tend to think at home it's ok…'*

Teacher: '*the ideal thing is that every parent should take the responsibility teaching their children these things but as a teacher I'll not assume because in some homes it is taboo to discuss some of these things.*'

DISCUSSION

Since the advent of free primary school education in January, 2003, primary school enrolment has increased. The age group who are in standard 7 and 8 in this study were 13-17 years of age. Previous Kenyan school based studies have had age groups aged 15-19 years[16]. There have been no studies on sexual behaviour in 13-14 year olds in Kenya, however there is a study that was conducted in Ghana, Malawi, Uganda and Burkina Faso which focused on knowledge, attitudes and practices of adolescents aged 12-14 year olds and 15-19 year olds. The 15 to 17 year olds that were in these studies were enrolled in high schools and were exposed to an advanced school syllabus and are socialized differently from those who are in primary schools.

This study demonstrated that 61.1% of the males and 68.9% of the females aged 13-17 years who participated in this study demonstrated in-depth knowledge concerning HIV/AIDS. This percentage difference between males and females was not statistically significant (P value=0.135) This outcome may be as a result of the school curriculum that teaches primary going students on the reproductive system and sexually transmitted diseases like HIV/AIDS. The standard 7 and 8 participants in this study were noted to have scored better than adolescents in Burkina Faso who demonstrated very low in-depth knowledge about HIV/AIDS, 5% of young adolescent females and 9% in young adolescent males aged 12-14 years old. A study done amongst school going 15-19 year olds in Kenyan high schools also demonstrated a high level of knowledge which did not differ by gender. [16, 21]

This study demonstrated that school teachers and mothers were important sources of information concerning body changes, sexual and reproductive health and how to conduct oneself in relationships with the opposite sex. To 53% of females and 15% of males, mothers were an important source of information concerning

sexual and reproductive health. It was noted that for the male student participants, although teachers were the most important source of information concerning body changes, sexual reproductive health systems and relationships between boys and girls. It was noted that films, books, friends and siblings were also important sources of information for them. Other studies have demonstrated that adolescents get their information from a wide range of sources. In Uganda, it was demonstrated that parents were a significant source of information concerning sexual and reproductive health with 51% in females and 27% in males. While in Ghana and Malawi, it has been demonstrated that the most dominant source of information is mass media for both males and females. The school teachers require support and training to help them maintain high credibility and reliability as the most important source of information for the standard 7 and 8 students. Caregivers, especially mothers require support and training on how to introduce and have conversations, interactions with their adolescents. The school would be a great tool to facilitate this aspect. A study done Nigeria among students aged 12-21 years of age revealed that students' sense of connectedness to their parents and their school decreased the likelihood of sexual activity.[25] The implication of this being that the positive relationships within the school i.e. between teachers and students, students and their caregivers could possibly help delay sexual debut in these students. A survey-based study that was conducted in a Nairobi slum revealed that when a father lived in the same household as his unmarried 12-19 year old daughters, they were less likely to have sex, an unwanted pregnancy or be active sexually than when neither parent or only the mother lived in the household.[31] This survey emphasized the importance of the father figure in the delay of sexual debut among 12-19 year old girls. The study done demonstrated that paternal participation in the matters regarding sexual and reproductive health, especially among the female adolescents was significantly low and it may possibly be detrimental to the delay of sexual debut in these female adolescents.

Concerning gender roles, 71.2% of the standard 7 students and 80.1% of the standard 8 students had appropriate responses. This was noted to be statistically significant (Pvalue=0.04). Gender roles and the beliefs around these roles that are reinforced through societies, communities, religious circles influence and guide sexual behaviour.[26] It is important to note that although 51% of the student participants are Catholic, religious background, family structure was not demonstrated to have statistical significance in the attitudes

concerning sexual behaviour. 77% of standard 7 and 82% of standard 8 students demonstrated appropriate attitudes towards relationships towards the opposite gender. These could be a reflection of the fact that the participants of this study were all enrolled in school. With school being a major aspect of their socialization and school teachers playing an important role as a source of information, the school has been demonstrated to shape a lot of the attitudes the student participants had towards sexual behaviour.

The practices that had been asked about in the questionnaire to the participants in standard 7 and 8 included having relationships, physical contact e.g. kissing, holding hands and hugging. 33.7% of the males reported of involvement in a relationship compared to 22.5% of their female counterparts. As for physical contact 30.3% of male had reported of participation versus 17.1% of female participating. There is a distinctive difference in this aspect. This could be as a result of over reporting on the part of males and possible underreporting by their female counterparts. It was noted from the observations made by caregivers and teachers that those adolescents who had experienced sexual intimacy had been as a result of curiosity, unwanted or coerced sexual intimacy. A study done in Ghana, Malawi, Uganda and Burkina Faso showed that among 12-14 year olds, 7-34% had experienced some form of intimate physical activity e.g. kissing, fondling or have had a boyfriend or girlfriend. For those aged 15-19 years of age in the same study, almost 60% of the females had had sex by age 18 years compared to 40-45% of their male counterparts. One in five females in Ghana, Malawi and Uganda reported that their first sexual experience occurred on the insistence of their partner or by force.[21] The transition between primary and secondary school is a crucial yet narrow window of opportunity to intervene and delay sexual debut for as long possible.

From the 8 focus group discussions conducted with caregivers and teachers, both groups were aware that some of the adolescents are knowledgeable about and have engaged in sexual behaviour. This finding is similar to a study that was conducted in Lesotho where parents were aware of their male and female adolescents being involved in sexual relationships.[27] Caregivers and teachers also alluded to low socio economic status being an important factor in the exposure of adolescents to sexual behaviour at an early age. Both caregivers and teachers said that caregivers should be the primary people to begin the conversation on sexual behaviour with adolescents. It was noted that cultural norms may be a barrier when it comes to

talking about sexual behaviour, as it may considered taboo to speak about sex. It was also noted that some caregivers may feel shy and be unable to speak to their adolescents about this sensitive topic. A study done by Ersheng (2001) showed that parents who ought to be the primary educators of their children concerning sexual behaviour play the least role in this area. Over 50% of the participants of the focus group discussions felt that it is the responsibility of the parent/caregiver to begin the conversation on sexual behaviour, about 30% of the participants felt that it should be the teachers' responsibility, less than 15% of them stated that it should be caregivers and teachers working together as a team so as to effectively communicate with adolescents about sexual behaviour.. Concerning the sharing of information on sexual behaviour, the parents and teachers involved in a study in Nigeria found that 59.6% said that parents should be the ones responsible,0.2% said teachers, while 3.5% of them said both parents and teachers should be responsible for this.[28] Concerning parental involvement, there were similarities noted in the two studies but there was a disparity concerning teachers. It would be detrimental to overlook teachers and the important role they play in the education and socialization concerning sexual behaviour particularly in the age group involved in this study.

LIMITATIONS

Asking adolescents in standard 7 and 8 about sexual matters had challenges due to the conservative nature of our African society as well as the ethical standards that had been set. The more intimate questions were reserved for the caregivers and teachers. Their responses were based on the observations they have made of children. A direct response from the adolescents concerning sexual practices would have been more accurate and ideal.

This study cannot be generalized to out of school adolescents who may engage in higher rates of sexual activity.

This study cannot be generalized to private school going adolescents of the same age who may have a different kind of exposure concerning sexual behaviour.

CONCLUSIONS

Adolescents who are enrolled in primary school in Dagoretti district have been noted to have a good level of knowledge and appropriate attitudes concerning sexual behaviour. The prevalence of inappropriate sexual behaviour is low.

School teachers and mothers should be given the necessary support to aid in the delay of sexual debut in the lives of these adolescents in standard 7 and 8 for as long as possible.

The observations made by teachers concerning sexual behaviour have been noted to be more frequent and at an earlier age group than what caregivers have observed or reported.

RECOMMENDATIONS

The resources used to give the age appropriate information concerning sexual and reproductive health to early adolescents should be reinforced and should be up to date.

There should be the establishment of programs that teach and motivate mothers to introduce and discuss the appropriate information concerning sexual and reproductive health with their adolescents.

There should be the establishment of programs that encourage more of paternal involvement in the education and support of adolescents concerning sexual and reproductive health.

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APPENDIX 2 - Consent Form (English)

Title: 'Knowledge, attitudes and practices concerning sexual behaviour among early adolescents in Dagoretti district.'

Parents/ Teachers Informed consent Document.

Principal Investigator: Dr. Ruth Karianjahi, post graduate student, Department of Paediatrics and Child Health.

Supervisors: Dr. Daniel Njai, senior lecturer paediatrician, University of Nairobi.

Dr. Dalton Wamalwa, senior lecturer paediatrician, University of Nairobi.

Dr. Josephine Omondi, Child and Adolescent Psychiatrist, lecturer, University of Nairobi.

Dr. Lucy Wainaina,senior lecturer paediatrician, University of Nairobi.

Institution: University of Nairobi, Department of Paediatrics and Child Health.

This Informed Consent Form has two parts:

- **Information Sheet (to share information about the study with you)**
- **Certificate of Consent (for signatures if you agree that you and your child may participate)**

You will be given a copy of the full Informed Consent Form

Part I: Information Sheet

Introduction

I am Dr. Ruth Karianjahi, currently pursuing a masters in medicine in Paediatrics at the University of Nairobi. I am doing research that I hope will help the school and home do more to help teenagers become and remain healthy. In my research, I will speak to many teenagers, both boys and girls, and ask them a number of questions. I will also want to speak to parents and teachers. This would be in order to understand what you know concerning teenage boys and girls. Whenever researchers study children, we talk to parents and ask for their permission. After you have heard more about the study, and if you agree, then the next thing I will do is ask your daughter/son for their permission as well. Both of you have to agree independently before I can begin.

There may be some words you do not understand. Please ask me to stop as we go through the information and I will take time to explain. If you have any questions later, you can ask them of me.

Purpose

As teenagers start to mature, it is important to understand what they know and understand concerning various things in day to day life. I would like to ask questions and have some discussion with them and with you concerning what sexual behaviour they may know about. I would also like to know what guides some of the decisions they make concerning these behaviours. I will invite them to share their knowledge and understanding concerning these behaviours. This would be to help me find ways to help them.

I would also like to know what you as a parent know concerning teenagers and some of the things you think they know.

Type of Research Intervention

This will be in form of a questionnaire to be filled in by the students and through focus group discussions. The discussions will be held separately for students, parents and teachers.

Selection of Participants

We would want to talk to as many teenagers as we possibly can in this study. We have selected your daughter/son because he/she is a teenager attending primary school in Dagoretti district. As a parent, we have selected you because you have a teenager attending primary school in Dagoretti district. The parents participating in the focus group discussions will be randomly selected and therefore not all parents who give consent will participate in the study.

As a teacher, we have selected you because you teach thirteen and fourteen year olds attending primary school in Dagoretti district. The teachers participating in the focus group discussions will be randomly selected and therefore not all teachers who give consent will participate in the study.

Voluntary Participation

We know that the decision can be hard concerning a sensitive topic like sexual behaviour and participation of your child is purely on a voluntary basis. Even if you were to allow your child to participate, we would also require permission from each child individually to allow us to include them in the study. Your participation in the discussions would also be on a voluntary basis.

Procedure

Your daughter/son will fill out a questionnaire that I will distribute and collect after completion. Your daughter/son will participate in focus group discussions and in-depth interviews which I shall be moderating. Their participation will be on a voluntary basis and their identities shall be protected for confidentiality purposes. The focus group discussions for parents will also be on a voluntary basis.

Duration

The questionnaire should take about one hour to complete and another hour to participate in the focus group discussions and in depth interviews. I am asking for about two hours of your child's time during the school term. I am also requesting for one hour of your time to come and attend the discussions with other parents.

Risks and Discomforts

Some of the questions in the questionnaire will be sensitive and personal. This is why the participation is voluntary in nature. The researcher and the research assistants will do their very best to make the environment as conlusive as possible for free expression and protect the information that is entrusted to the research team.The filling in of the questionnaire, the participation in the focus group discussions and in depth interviews is all purely voluntary. Your daughter/son may choose to discuss the questionnaire and discussions with you but they do not have to. I shall not share the questionnaire, or the specific responses you or your child may give. This is for purposes of confidentiality for the parents, teachers and teenagers participating in the study.

Benefits

Your child's participation is likely to help me find out what the knowledge and attitudes of teenage boys and girls are. I hope that it will help you as a parent and the school be better equipped to guide the teenagers as they continue to mature. It will be good to also discover what you know concerning teenagers.

Reimbursements

There would be no financial reimbursements for the voluntary participation in the study. For parents participating in the study, there will be bus fare provided for those coming to the school.

Confidentiality

I will not share information about you or your daughter/son outside of the research team. The information collected from the research project will be kept confidential. Information from you or your child that will be collected from the research will be put away and no one but the researchers will have access to it. It will be kept under lock and key during the studies, no names will be used to maintain the participants' confidentiality. For the focus group discussion, information given will be recorded through note taking by the researcher or research assistants as well as by use of a dictaphone. The data collected will then be entered into a computer for analysis purposes. Any of the data entered will be password protected. The password will only be known to the researcher and research assistant.

I will ask you and your child not to discuss what is said in the focus group discussions in confidence by other participants in the groups.

Sharing of Research Findings

At the end of the study, I will share what I have learned with the participants, parental and school community. The primary data collected will be reproduced as analysed and anonymised data. None of the information shared will be attributed to any of the children, parents or teachers participating by name. A written report will be submitted to the school and the parents associations of the participating schools concerning the findings of the study. I also plan to publish the results so that other interested persons may learn from this research project.

Voluntary Consent

Participation in this study will be voluntary. Choosing to participate in the study or not will not change your own or your child's treatment at the school where the study will be conducted.

Who to Contact

If you have any queries you may contact me via email

rkarianjahi@gmail.com

Or the Kenyatta National Hospital Ethics Research Committee via email

uonknh_erc@uonbi.ac.ke

Certificate of Consent

I have read the foregoing information, or it has been read to me. I consent for the voluntarily for my child to participate as a participant in the study.

Print Name of Parent/Guardian/Teacher _____

Signature of Parent/Guardian/Teacher_____

I consent to voluntary participation in the focus group discussion and for the use of a Dictaphone during the collection of data for the purpose of accurate collection of information from the discussions.

Print Name of Parent/Guardian/Teacher_____

Date _____

Day/month/year

I have witnessed the accurate reading of the consent form to the parent of the potential participant, and the individual has had the opportunity to ask questions. I confirm that the individual has given consent freely.

Print name of witness_____ AND Thumb print of participant

Signature of witness _____

Date _____

Day/month/year

Statement by the researcher/person taking consent

I have accurately read out the information sheet to the parent of the potential participant, and to the best of my ability made sure that the person understands that the following will be done:

1. **A questionnaire will be filled in by the participants**
2. **Focus group discussions will also be conducted**
3. **In depth interviews will be conducted.**

I confirm that the parent was given an opportunity to ask questions about the study, and all the questions asked by him/her have been answered correctly and to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.

A copy of this Informed Consent Form has been provided to the parent or guardian of the participant ____

Print Name of Researcher/person taking the consent_____

APPENDIX 3 – Consent Form (Swahili)

Ridhaa kwa wazazi wa wanafunzi wa mapema wa kiume na wa kike kushiriki katika utafiti yenye jina la 'Maarifa, mitazamo na mazoea kuhusu tabia ya ngono miongoni mwa vijana mapema wilayani Dagoretti.'

Mpelelezi mkuu: Dr. Ruth Karianjahi

Taasisi: Chuo kikuu cha Nairobi, Idara ya Paediatrics

Wasimamizi: Dr. Daniel Njai,Chuo Kikuu cha Nairobi.

Dr. Dalton Wamalwa, Chuo Kikuu cha Nairobi.

Dr. Josephine Omondi, Chuo Kikuu cha Nairobi.

Dr. Lucy Mungai Wainaina, Chuo Kikuu cha Nairobi.

Hii Ridhaa fomu ina sehemu mbili:

- Karatasi ya Habari (kushiriki kuhusu habari ya utafiti na wewe)
- Hati ya Ridhaa (kwa saini kama wewe kukubaliana kwamba wewe na mtoto wako anaweza kushiriki)

Utapewa nakala ya fomu kamili.

Maelezo ya karatasi

Jina langu ni Dr. Ruth Karianjahi kutoka kikuo kikuu cha Nairobi. Tumaini langu ni utafiti wangu utasaidia shule na nyumba kufanya zaidi kusaidia vijana kuwa na kubaki na afya. Katika utafiti wangu, nitaongea na vijana wengi, wasichana na wavulana, na kuwauliza maswali kadhaa. Nitataka pia kuongea na wazazi na walimu pia. Hii itakuwa ili kugundua maarifa, mitazamo na tabia kuhusu tabia zaa ngono miongoni mwa vijana mapema,wazazi na walimu wao.

Kusudi

Kwa wakati huu wa kukomaa, ningependa kuwauliza hawa vijana maswali na pia kujadiliana nao, walimu na wazazi wao kuhusu tabia za ngono.

Aina ya Kuingilia Utafiti

Hii itakuwa katika mfumo wa dodoso itakayopewa kwa wanafunzi. Utafiti utakuwa pia kwa njia ya majailiano ya vikundi. Vikundi hivi vitakuwa tofauti kwa wanafunzi, wazazi na walimu.

Uteuzi wa Washariki

Tungependa kuzungumza na wanafunzi wa kike na wa kiume wanao hudhuria shule ya msingi katika wilaya ya Dagoretti. Pia tutataka kuongea na wazazi wa watoto wanaohudhuria shule ya msingi katika wilaya ya Dagoretti. Tungependa kuongea na walimu wa wanafunzi wa hizi shule.\

Ushirikishwaji wa Hiari

Tunajua kwamba uamuzi unaweza kuwa ngumu kuhusu mada nyeti kama tabia ya ngono na ushiriki wa mtoto wako ni rena kwa hiari. Hata ukiruhusu mtoto wako kushiriki,tutahitaji ruhusa kutoka wanafunzi wanaoshiriki.

Utaratibu

Binti yako/ mwana watajaza dodoso kwamba nitasambaza na kukusanya baada ya kukamilika. Binti yako/ mwana ,wazazi na walimu watashiriki katika majadiliano ya vikundi tofauti. Ushiriki wao utakuwa kwa hiari na utambulisho wao na wako kama mzazi au mwalimu, utalindwa kwa madhumuni ya usiri.

Muda

Dodoso inapaswa kuchukua saa moja kukamilisha na saa nyingine kushiriki katika majadiliano ya vikundi.

Faida

Ushiriki wa mtoto wako ni uwezekano kusaidia mimi kujua ujuzi na mitazamo ya wavulana na wasichana wenye umri ndogo ni. Natumaini kwamba itasiadia wewe kama mzazi na shule kuwa na vifaa bora kuongoza vijana kama wanaendelea kukomaa hasa kulingana na tabia ya ngono.

Fedha

Hakutakuwa na fedha ya aina yeyote kwa ajili ya ushiriki ya hiari katika utafiti. Kutakuwa na nauli ya basi zitazotolewa kwa wazazi wale watakuja shule kushiriki katika majadiliano.

Usiri

Mimi sitashiriki habari kuhusu wewe au binti /mwana wako nje ya timu ya utafiti. Taarifa zilizokusanywa kutoka mradi wa utafiti itakuwa siri. Habari kutoka wewe au mtoto wako kwamba itakuwa zilizokusanywa kutoka utafiti itakuwa kuweka mbali na hakuna mtu lakini watafiti watakuwa na huduma hiyo. Matokeo ya utafiti yatafungiwa vizuri. Hakuna majina zitatumika kudumisha usiri washiriki.

Nani Wasiliana

Kama una maswali yoyote unaweza kuwasiliana nami kupitia email

rkarianjahi@gmail.com

Au Kenyatta National Hospital Ethics Research Committee kupitia anwani ya barua pepe uonknh_erc@uonbi.ac.ke

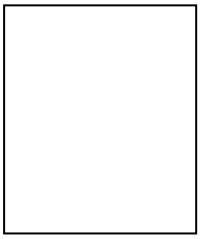
Hati ya Ridhaa

Mimi kama mzazi/mlezi/mwalimu nimejitolea kwa hiari yangu bila kushurutishwa, kushiriki katika utafiti huu. Nimeshaelezwa yakwamba hakutakuwa na malipo yoyote kwa kushiriki kwangu. Nimefahamishwa kuwa matokeo yatakuwa ni siri kati ya mtafiti na mimi. Nimeelezewa kuhusu utumishi wa vivaa vya kurekodi maoni yao na nimekubali vitumiwe.

Sahihi ya mzazi/mlezi-_____

Tarehe_____

Au

Alama ya kidole 

Sahihi ya shahidi_____

Tarehe_____

APPENDIX 4 – Assent Form

UNIVERSITY OF NAIROBI, DEPARTMENT OF PAEDIATRICS AND CHILD HEALTH

POSTGRADUATE PROGRAMME RESEARCH INFORMED ASSENT FORM

This informed consent form is for teenagers between the ages of 13-14 years who attend primary school in Dagoretti district to participate in the research.

This form does not replace an informed consent form signed by parents or guardians.

Name of Principal Investigator: Dr. Ruth Karianjahi

Name of organization: University of Nairobi, Department of Paediatrics and Child Health

This Informed Assent Form has two parts:

- **Information Sheet (gives you information about the study)**
- **Certificate of Assent (this is where you sign if you agree to participate)**

Information

My name is Dr. Ruth Karianjahi and I am interested in finding out what you know concerning sexual behaviour. I am inviting you to be part of this research study. You can chose whether or not you want to participate. I have discussed this research with your parent/guardian and they know that I am asking you for your agreement. If you are going to participate in the research, your parent/guardian also has to agree. Your participation is on a voluntary basis.

There may be words of phrases you do not understand or things you would want me to explain. Please ask me and I will take the time to explain it to you.

Purpose

I would like to ask questions and have discussions with teenagers aged 13-14 years concerning boy-girl relationships. This will help me find practical solutions for various concerns affecting these boy-girl relationships.

Choice of Participants

I am requesting your participation in this study because you are 13-14 years of age. You are currently attending a primary school in Dagoretti district.

Your participation will be voluntary

Procedures

If you agree to participate, I would be requesting for you to fill in a questionnaire. The privacy of each participant will be protected. I would also be requesting you to participate in group discussions with some of your class mates. There would also be interviews with some students individually.

Benefits

Your participation may help me understand what your concerns are when it comes to this sensitive subject. It may also assist me to help other teenagers, their parents and teachers to be better equipped to deal with this subject.

Reimbursements

There will be no monetary reimbursements for participation in the study.

Privacy

I will not tell other people that you are in this research and I will not share this information with other people, except the research team... Your personal information will be kept under lock and key only accessible to the principal researcher.

Sharing the Findings

Once the results have come out, I will share the analysed data that is anonymous with you, parents and teachers what we have learned. I will share the information with other researchers and scientists for the purpose of learning more about teenagers your age.

Who to Contact

In case of any questions or clarifications, I can be reached at rkarianjahi@gmail.com

I will do my best to address any concerns you may have.

Part 2: Certificate of Assent

I have read the information concerning this study and I agree to participate in the study.

If child Assents:

Print name of child _____

Signature of child: _____

Date:_____

Day/month/year

I do not wish to take part in the research and I have not signed the assent above

._____ (initialled by child/minor)

Signature of researcher_____

Date_____

Day/month/year

Statement by the researcher/person taking consent

I have accurately read out the information sheet to the potential participant, and to the best of my ability made sure that the child understands that the following will be done:

1 A questionnaire will be filled in.

2 Focus group discussions will be held with other classmates

3. In-depth interviews will be carried out as well.

A copy of this assent form has been provided to the participant.

Print Name of Researcher/person taking the assent_____Signature of Researcher /person taking the assent _____Date _____Day/month/year

APPENDIX 5 – Time Frame

Activity	Dec '12	Jan '13	Feb '13	Mar '13	Apr '13	May '13	June '13	July '13	Aug '13	Sept '13	Oct '13	Nov '13	Dec '13	Jan '14	Feb '14	Mar '14
Proposal development																
Submission to ERC for Approval																
Corrections from ERC and Resubmission																
Permission from Min of Education and Participating Schools																
Data Collection																
Data Analysis and Report writing																
Poster presentation																

APPENDIX 6: QUESTIONNAIRE

The following questions are about yourself and your family

1. What is your gender? (Circle only one answer)
    A. MALE
    B. FEMALE
2. When were you born?_____(Day/Month/Year)
3. What class are you in?(Circle one answer)
    A. Standard Seven
    B. Standard Eight
4. What is your religion?(Circle only one answer)
    A. Catholic
    B. Muslim
    C. Protestant
    D. No religion
5. How often do you attend religious services in a week?
    A. Everyday
    B. Atleast once a week
    C. Atleast once a month
    D. Atleast once a year
    E. Never
6. How important is religion in your life?(Circle only one answer)
    A. Very important
    B. Somewhat Important
    C. Not very important
    D. Not important at all
7. Are the parents(please indicate one)
    A. Married
    B. Single
    C. Divorced
    D. Separated
    E. widowed
8. Who do you live with?
    A. Both parents
    B. One parent
    C. Relative
9. Is your father alive? YES NO
10. I f yes, does he live in the same house as you? YES NO
11. Do you find it easy to talk to your father about things that are important to you?
    A. Very easy
    B. Easy
    C. Average
    D. Difficult

E. Very difficult
F. Do not see him

12. Have you ever discussed relationship-related matters with your father? YES NO
13. If yes to the above question, often or occasionally?
    A. Often
    B. Occasionally
    C. Never
14. Is your mother alive? YES NO
15. If yes, does she live in the same house as you? YES NO
16. Do you find it easy to talk to your mother about things that are important to you?
    A. Very easy
    B. Easy
    C. Average
    D. Difficult
    E. Very difficult
    F. Do not see her
17. Have you ever discussed relationship-related matters with your mother? YES NO
18. If Yes, to the above question ,often or occasionally?
    A. Often
    B. Ocassionally
    C. Never
19. Do you have any older brothers? YES NO
20. If yes to the above question, do any live in the household? YES NO
21. Do you have any older sisters? YES NO
22. If yes to the above question, do any live in the household? YES NO
23. What is the highest level of education your father or male guardian has completed?
    A. Did not go to school
    B. Primary school
    C. Secondary school
    D. Vocational school
    E. Training college
    F. University
    G. Not sure/I don't know
24. Is your father or male guardian employed?
    A. Yes, he has a job now.
    B. Yes, he is self employed.
    C. He is retired
    D. He is temporarily unemployed
    E. No, he is not employed
25. What is the highest level of education your mother or female guardian has completed?
    A. Did not go to school
    B. Primary School
    C. Secondary School
    D. Vocational school
    E. Training college
    F. University

G. Not sure/ I don't know

26. Is your mother or female guardian employed?
    A. Yes, she has a job now.
    B. Yes, she is self employed
    C. She is retired
    D. She is temporarily unemployed
    E. No, she is not employed

27. Boys' and girls' bodies change during the teenage years(puberty) and information about these changes is available from different sources.
    A. School teacher
    B. Father
    C. Mother
    D. Sister
    E. Brother
    F. Other family member
    G. Friends
    H. Health care workers
    I. Books/magazines
    J. Films /videos

    From the choices above, kindly answer the following questions:

    i) what has been the most important source of information for you on this topic?(fill in one choice only)_____
    ii) what has been the second most important source of information for you in this topic?(fill in one choice only)_____
    iii) from whom ,or where would you prefer to receive more information on this topic from?(fill in one choice only)_____

28. On the topic of sexual and reproductive systems in men and women i.e where eggs and sperm are made and how pregnancy occurs.
    A. School teacher
    B. Father
    C. Mother
    D. Sister
    E. Brother
    F. Other family member
    G. Friends
    H. Health care workers
    I. Books/magazines
    J. Films /videos

    From the choices above, kindly answer the following questions:

    i) what has been the most important source of information for you on this topic?(fill in one choice only)_____
    ii) what has been the second most important source of information for you in this topic?(fill in one choice only)_____

iii) from whom ,or where would you prefer to receive more information on this topic from?(fill in one choice only)_____

29. On the topic of how boys should treat girls and how girls should treat boys in relationships.

A. School teacher
B. Father
C. Mother
D. Sister
E. Brother
F. Other family member
G. Friends
H. Health care workers
I. Books/magazines
J. Films /videos

From the choices above, kindly answer the following questions:

i) what has been the most important source of information for you on this topic?(fill in one choice only)_____

ii) what has been the second most important source of information for you in this topic?(fill in one choice only)_____

iii) from whom ,or where would you prefer to receive more information on this topic from?(fill in one choice only)_____

The following are some views about relationships(,please circle the answer you think is correct per view)

1	I believe that it is alright for unmarried boys and girls to have dates	Agree	Disagree	Don't know
2	I believe that it is alright for boys and girls to kiss and hug each other	Agree	Disagree	Don't know
3	I believe there is nothing wrong with unmarried boys and girls having sexual intercourse if they love each other	Agree	Disagree	Don't know
4	I think that sometimes a boy has to force a girl to have sex if he loves her	Agree	Disagree	Don't know
5	A boy will not respect a girl who agrees to have sex with him before marriage	Agree	Disagree	Don't know

6	Most girls who have sex before marriage regret it afterwards	Agree	Disagree	Don't know
7	Most boys who have sex before marriage regret it afterwards	Agree	Disagree	Don't know
8	A boy and a girl should have sex before they become engaged to see whether they are suited for each other	Agree	Disagree	Don't know
9	I believe that girls should remain virgins until they marry	Agree	Disagree	Don't know
10	I believe that boys should remain virgins until they marry	Agree	Disagree	Don't know

30. **<u>The following statements are about YOUR beliefs about the roles of males and females.(Please circle the answer you think is correct)</u>**

1	Males and females should have equal rights	Strongly agree	Agree	Indifferent	Disagree	Strongly disagree
2	It is okay for a boy to do household chores	Strongly agree	Agree	Indifferent	Disagree	Strongly disagree
3	In a relationship a boyfriend and girlfriend Should have equal say in important decisions.	Strongly agree	Agree	Indifferent	Disagree	Strongly disagree
4	Boys should be asked to spend as much time on household chores as girls	Strongly agree	Agree	Indifferent	Disagree	Strongly disagree
5	When family money is scarce only boys should be sent to school	Strongly agree	Agree	Indifferent	Disagree	Strongly disagree
6	When family money is scarce only girls should be sent to school	Strongly agree	Agree	Indifferent	Disagree	Strongly disagree
7	A girl should leave her boyfriend, no matter the reason	Strongly agree	Agree	Indifferent	Disagree	Strongly disagree
8	A boyfriend should expect his girlfriend to wash his clothes and cook for him	Strongly agree	Agree	Indifferent	Disagree	Strongly disagree
9	Women should have the same opportunities as men to hold leadership positions in my town	Strongly agree	Agree	Indifferent	Disagree	Strongly disagree
10	It is okay for a boyfriend to beat his girlfriend to show her	Strongly agree	Agree	Indifferent	disagree	Strongly disagree

	who is in control					
11	A girlfriend should leave her boyfriend if he does not give her money for her needs	Strongly agree	Agree	Indifferent	Disagree	Strongly disagree
12	A girlfriend should leave her boyfriend if he doesn't love her	Strongly agree	Agree	Indifferent	Disagree	Strongly disagree
13	A boyfriend should leave his girlfriend if she doesn't love him	Strongly agree	Agree	Indifferent	Disagree	Strongly disagree
14	A girlfriend should expect a boyfriend to be faithful to her	Strongly agree	Agree	Indifferent	Disagree	Strongly disagree
15	A boyfriend should expect a girlfriend to be faithful to him	Strongly agree	Agree	Indifferent	Disagree	Strongly disagree

31. Have you ever had a boyfriend or girlfriend. That is a person of the opposite sex whom you have been attracted to and dated?(please circle one) YES NO

32. Are you currently in a relationship or dating a member of the opposite sex?(please circle one) YES NO

33. If yes, how long have you been dating your boyfriend or girlfriend?(please circle only one)

A. A few weeks (less than four weeks)
B. One to three months
C. Three to six months
D. More than six months

34. How would you describe your relationship with your boyfriend or girlfriend?

A. A casual friendship
B. A serious relationship but with no intention of getting married.
C. A serious relationship that might lead to marriage.

35. Do you and your boyfriend or girlfriend have any physical contact e.g holding hands, hugging?(please circle only one) YES NO

36. **<u>The following questions are about knowledge about HIV/AIDS. Please circle the answer you think is correct.</u>**

1	Primary school students are at risk of being infected with HIV	True	False	Not sure
2	HIV/AIDS can be spread through mosquito bites	True	False	Not sure
3	HIV/AIDS can be transmitted to me when I donate my blood	True	False	Not sure
4	HIV/AIDS can be transmitted to me if I receive a blood transfusion	True	False	Not sure
5	A person can get HIV even if he/she has unprotected sex with a HIV infected person only once	True	False	Not sure
6	A person would know if he/she had been infected with HIV immediately	True	False	Not sure
7	A person with HIV can look and feel healthy	True	False	Not sure
8	A pregnant woman with HIV can give the virus to her unborn child	True	False	Not sure
9	It is harder for women to get HIV from men than for men to get HIV from women	True	false	Not sure
10	Is it possible to cure HIV/AIDS	True	False	Not sure
11	A person can do a simple test to find out whether he/she has HIV	True	False	Not sure

How often do you do the following things?

Go to the disco or club	Often	Sometimes	Rarely	Never
Go to parties meant for young people only	Often	Sometimes	Rarely	Never
Smoke cigarettes	Often	Sometimes	Rarely	Never
Drink beer	Often	Sometimes	Rarely	Never
Drink Changáa or other brews	Often	Sometimes	Rarely	Never
Smoke Marijuana or Bhangi	Often	Sometimes	Rarely	Never
Used other drugs	Often	Sometimes	Rarely	Never

APPENDIX 7 - Focus Group Discussion Guide

Principal Investigator/ Moderator: Dr. Ruth Karianjahi

- Number of participants will be 4-8. The teachers and parents will each have separate focus group discussions. Participants will be selected because they are either a parent of an adolescent attending primary school in Dagoretti district OR a teacher of an adolescent attending primary school in Dagoretti district.
- Welcome the participants into the room provided by the school
- The duration of the exercise will be 45- 60 minutes.
- Participants will be welcomed and introduced to the moderator and the moderator's assistants.
- They will then be seated in a circular format .
- The moderator will give a brief description of the study and the purpose of gathering the participants.
- Guidelines/ 'house rules' of the discussion will then be stated to the group. They will include:
  -There will be no use of names, everyone will be assigned a number instead and will be called by number.
  -It is to be made clear that there will no right or wrong answers and everyone is to respect the opinions of other participants.
  -People are to speak one at a time for the purpose of clear recording.
  -Where applicable, all cell phones to be switched off and all participants are to remain seated during the course of the discussion
- Inform the group that there will be a recording device for the purpose of accurate compilation of the group's opinions and insights. Assure the group of confidentiality.
- A warm up- brief self introduction from each person participating in the group discussion.
- After introductions, the Dictaphone is switched on and the discussion is started. The questions for both teachers and parents:
  -In your understanding, what is sexual behaviour?
  -In your observation how early are adolescents aware of sexual behaviour?
  -In your observation at what age have you noted adolescents engaging in sexual behaviour?
  -What is the best age to begin to talk to adolescents about sexual behaviour?
  -Who in your opinion is the best suited to talk to adolescents about sexual behaviour?
- Use the last five to ten minutes to summarize the identifying themes of the group.
- Inform the participants that the focus group discussion has ended.
- Thank each participant for coming and for participating in the discussion.
- Serve refreshments after closing the group discussion.

APPENDIX 8 - Study Budget

DAGORETTI DISTRICT KAP STUDY				
BUDGET FOR DECENTRALISED RESEARCH				
ITEM	**QUANTITY**	**UNIT PRICE**	**TOTAL (KSH)**	**TOTAL USD**
SUPPLIES				
Biro Pens	6	20.00	120.00	1.50
Pencils	6	10.00	60.00	0.75
Box file	2	150.00	300.00	3.75
Spring files	1	100.00	100.00	1.25
Pencils sharpener	1	50.00	50.00	0.63
White out pen	1	150.00	150.00	1.88
Folder	4	50.00	200.00	2.50
Staple	1	500.00	500.00	6.25
Paper Punch	1	600.00	600.00	7.50
Staple Romover	1	250.00	250.00	3.13
Note book	1	100.00	100.00	1.25
Dicta Phone Recorder	1	15,000.00	15,000.00	187.50
TOTAL SUPPLIES		**16,980.00**	**17,430.00**	**217.88**
OTHERS				
Printing and Photocopying	1	10,000.00	10,000.00	125.00
Final proposal booklet	1	4,000.00	4,000.00	50.00
Ethic comm, Bk	1	1,000.00	1,000.00	12.50
A poster	1	2,000.00	2,000.00	25.00
TOTAL OTHER		**17,000.00**	**17,000.00**	**212.50**
Transport	**1**	**40,000.00**	**40,000.00**	**500.00**
Communication	**1**	**9,400.00**	**9,400.00**	**117.50**
Data Statistitian	**1**	**10,000.00**	**10,000.00**	**125.00**
TOTAL PERSONNEL		**59,400.00**	**59,400.00**	**742.50**
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TOTAL EXPENSES		**93,380.00**	**93,830.00**	**1,172.88**