Maternal Awareness Of Reproductive Health Practices
And Its Impact On Adolescent Pregnancy:
A Study Of Mothers In Dagoretti Community, Nairobi.

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Of Kenyatta University.

Department Of Zoology
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November 2001
DECLARATION

This thesis is my original work and has not been presented for a degree in any other University or any other award.

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This thesis is dedicated to my parents Mr. James Waweru and the late Mary Wanjiru, My husband, Mr.Kabue and our children Sylvia, Kenneth and Caesar.
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<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>A MREF</td>
<td>African Medical Research Foundation</td>
</tr>
<tr>
<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
</tr>
<tr>
<td>CCP</td>
<td>Centre of Communication Programs</td>
</tr>
<tr>
<td>CSA</td>
<td>Centre for the Study of Adolescent</td>
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<td>FLE</td>
<td>Family Life Education</td>
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<td>FPAK</td>
<td>Family Planning Association of Kenya</td>
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<tr>
<td>FGD</td>
<td>Focus Group Discussion</td>
</tr>
<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
</tr>
<tr>
<td>IPPF</td>
<td>International Planned Parenthood Federation</td>
</tr>
<tr>
<td>JHPCS</td>
<td>Johns Hopkins Population Communication Services</td>
</tr>
<tr>
<td>JHSPH</td>
<td>Johns Hopkins School of Public Health</td>
</tr>
<tr>
<td>KDHS</td>
<td>Kenya Demographic Health Survey</td>
</tr>
<tr>
<td>KNRPD</td>
<td>Kenya National Report on Population and Development</td>
</tr>
<tr>
<td>NASCOP</td>
<td>National AIDS And STDS Control Program</td>
</tr>
<tr>
<td>NCPD</td>
<td>National Council for Population Development</td>
</tr>
<tr>
<td>PATH</td>
<td>Program for Appropriate Technology in Health</td>
</tr>
<tr>
<td>PIP</td>
<td>Population Information Program</td>
</tr>
<tr>
<td>RHK</td>
<td>Reproductive Health Knowledge</td>
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<tr>
<td>STI</td>
<td>Sexually Transmitted Infections</td>
</tr>
<tr>
<td>UNAIDS</td>
<td>Joint United Nations Program on HIV / AIDS</td>
</tr>
<tr>
<td>UNFPA</td>
<td>United Nations Fund for Population Activities.</td>
</tr>
<tr>
<td>UNICEF</td>
<td>United Nations Children Fund</td>
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<td>WHO</td>
<td>World Health Organization</td>
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Unchecked high rate of pregnancy among adolescents is a major concern in the developing countries due to associated risks that include obstructed labour, abortion and high maternal morbidity and mortality. Through appropriate knowledge of reproductive health, adolescents develop correct perception that enable them to make responsible and informed choices regarding sex. Adolescents in the developing world have little knowledge of reproductive health yet there is considerable resistance to teaching reproductive health in school due to prevailing parental and religious opposition. Parents need to counsel adolescents on reproductive health in order to reduce adolescent pregnancy. Studies in the field of adolescent fertility have tended to focus on adolescents, not parents, yet parents play an important role in the upbringing of their children. Therefore, there is need to review approach of counselling adolescents.

In view of this a cross-sectional study was conducted on mothers in Dagoretti, a peri-urban area of Nairobi City, with the aim of establishing maternal awareness of reproductive health practices, maternal counselling of adolescent on reproductive health issues and the extent of maternal influence on the prevention of adolescent pregnancy. Further, the study sought to find whether mothers had adequate knowledge, right attitudes and communication skills to guide and counsel adolescent girls.

The study population was composed of women above 20 years with at least one child. Both structured interviews and Focus Group discussions were used to collect data. A total of 478 women responded to the structured questionnaire and 3 Focus Group discussions were held. Based on knowledge of family planning, fertility and sexually transmitted infections, 70% of the respondents were considered knowledgeable on reproductive health practices. Knowledge on reproductive health was positively associated with age of the respondents ($\chi^2 = 21.9, p = 0.038$) and level of education ($\chi^2 = 33.8, p = 0.0001$).
Forty-four point four percent of the respondents reported being a guardian or a mother of pregnant adolescent. Adolescent pregnancy in a home was negatively associated with respondents' educational level \((\chi^2 = 11.4 \ p = 0.009)\) and religion \((\chi^2 = 18.9 \ p = 0.018)\) but positively associated with number of children \((\chi^2 = 13.9 \ p = 0.007)\). Majority of the mothers 59.9\% (286) counselled adolescent girls who were not related to them while only 30.8\% of the 240 respondents who had adolescent daughters counselled them. Counselling own adolescent daughter was positively associated with respondents' age \((\chi^2 = 77.9 \ p = 0.001)\) also educational level \((\chi^2 = 21.1 \ p = 0.0001)\) but negatively associated with number of children \((\chi^2 = 64.3 \ p = 0.0001)\). Respondents' counselling of adolescents not related to them was negatively associated with number of children \((\chi^2 = 15.3 \ p = 0.004)\) and positively associated with occupation \((\chi^2 = 11.6 \ p = 0.021)\). However, maternal knowledge of reproductive health practices was not significant associated with counselling of adolescents \((\chi^2 = 0.04 \ p = 0.8)\) or presence of adolescent pregnancy \((\chi^2 = 3.0 \ p = 0.08)\).

The study also shows that 99.2\% of the respondents do not object to teaching of reproductive health practices in schools, though 68.5\% of the mothers disapprove adolescent access to family planning services claiming that this would encourage immorality and cause infertility among adolescents.

The study concludes that knowledge of reproductive health practices increases with the level of education of the mother and number of children. Knowledge of reproductive health of the mother has no influence on adolescent pregnancy and adolescent child counselling. This suggests that other factors such as education and counselling skills were required among the respondents to offer guidance and counselling. This information is useful for policy makers in developing educational strategies which will empower mothers with education and counselling skills to enable them counsel adolescent girls effectively thus reducing adolescent pregnancy.
CHAPTER ONE

Introduction And Literature Review

1.1 Background To the Study.

Adolescence has been defined as a period between 10-20 years (WHO, 1993; UNFPA, 2001). In 1997 one out of six people in the world was an adolescent and eighty-five percent of those adolescents lived in the developing countries (UNFPA, 1997). Each year about 15 million adolescents aged between 15-19 years worldwide gave birth and a further 4 million obtained an abortion (UNAIDS, 1997).

In 1998, the proportion of adolescents with children was 3% in Kenya at age 15 years but rose to 45% by age 19 years (NCPD *et al.*, 1998). Most of those pregnancies were unwanted and constituted 35% of all obstetric cases in Kenya (IPPF, 1995). Thirty six percent of those adolescent pregnancies ended up in abortions resulting in morbidity and mortality (IPPF, 1995). Most adolescents were sexually active and in some regions half of them were married, hence the high number of adolescent pregnancies (Blanc and Way, 1998). Sexual activity puts adolescents at risk of various reproductive health challenges. These include unwanted pregnancy leading to abortion, low level of education as a result of premature termination of formal education and sexually transmitted diseases including HIV/AIDS (IPPF, 1995).

The traditional family structure that used to guide adolescents on sexual behaviours is thought to have disappeared with the affluent Kenyan society. One of the consequences of this is rise in adolescence pregnancy (Ferguson, 1988). To mitigate this trend parents should empower adolescents with information of reproductive health practices. Through knowledge of reproductive health, adolescents develop correct perception that enables them to make
responsible and informed choices. Adolescents often lack basic information and skills in negotiating sexual relationships. They have no access to affordable, confidential reproductive health services. Lack of privacy in health facilities and real or perceived disapproval by the health workers limit access to services where they exist. Most adolescents do not have strong relationship with their parents with whom they can talk about reproductive health concerns (PATH/UNFPA, 1998).

There is considerable resistance to teaching girls about reproductive health in schools since this may encourage licentiousness (Bledsoe et al., 1993). Educational authorities fear parental opposition to reproductive health courses. Some parents want to retain responsibility of educating their children; others feel it is the schools duty (Bledsoe et al., 1993). Studies indicate that sex education leads to delay in or decrease in sexual activity (IPPF, 1995), but parents feel least knowledgeable and comfortable in discussing reproductive health with adolescents (Erulkar et al., 1998). Studies in the field of adolescents’ fertility have tended to focus on the adolescent, not parents, yet there is little communication between adolescent girls and their mothers on issues relating to sexuality and motherhood (IPPF, 1995). Parents need to teach their adolescents (both boys and girls) reproductive health and only then will they be able to avoid unwanted pregnancy.

1.2 Adolescent Pregnancy

Unchecked high rate of fertility of adolescents is a major concern in the developing countries due to risks that include obstructed delivery, abortions, maternal morbidity and mortality and other delivery complications (Lattenmaier et al., 1988). Babies born to mothers under 20 years of age suffer higher rates of infant and child mortality than those born to mothers aged 20 – 39 years old (NCPD et al., 1993). This high rate of fertility is as a result of a
combination of social, cultural and physiological factors. The traditional family structure that used to guide adolescents on sexual behaviours has disappeared. The breakdown of cultural values and westernization has led to increased promiscuity resulting in high levels of adolescent pregnancies. Improved health care and high quality nutritional intake has resulted in earlier menarche thus making the situation worse.

While the age of sexual maturity has been falling, ignorance of anatomy of reproduction has put many girls vulnerable to pregnancy. Parents, teachers and religious organisations are not willing to take whole responsibility for imparting the necessary knowledge in a way relevant to contemporary conditions (Ferguson, 1988). The effect of female education on fertility rate is quite marked: the more educated the girl the later the age of marriage and the greater the desire for a small family. Socio-economic consequences of adolescents bearing children leads to early motherhood, rapid subsequent deliveries, more undesired children out of marriage. The young mothers will face greater marital instability, are more poorly educated and have fewer assets plus lower income later in life (UNICEF, 1993; NCPD, 1994). Undesired pregnancy in early life is usually due to lack of access to information and services, unwanted sexual relationships, unprotected sex or ineffective use of contraceptives (UNFPA et al., 1998).

In Kenya 52% of young people aged 15 to 19 years were sexually active (KNRPD, 1994). Majority of these adolescents become pregnant, had abortions, or contracted sexually transmitted infections. Every day 390 adolescents give birth, which accounts for 12% of Kenya’s total fertility. Around 45% of adolescent girls begun child bearing by age 19 of which 90% of those pregnancies were undesired (NCPD et al., 1994; Njau And Radeny, 1995). Over 10% of female students (estimated at 8,000 – 13,000 girls) drop out of school each year due to pregnancy thus limiting their development and consequently Kenya’s socio-
economic advancement (Ferguson, 1988). Of these, 66% became pregnant while in primary school (Ajayi et al., 1991). Over 40% of all documented schoolgirl pregnancies terminate in abortion (Youri, 1994). This accounted for the high number of deaths due to abortion estimated at 1,000 to 5,000 Kenyan women annually (CSA, 1994; CSA/JHPCS, 1995).

Among 35 studies carried out by World Health Organisation, 10 studies revealed that sex education did not lead to increased sex activity but increased adoption of safer sexual practices by sexually active youth. Six of the studies revealed that young people delayed starting sexual activity or decreased their overall sexual activity after reproductive health education (IPPF, 1994; Grunseit, 1997).

In 1984 in Mexico City the International Conference on population on the subject of teenage pregnancy recommended that all the adolescents both boys and girls receive adequate education on Family Life Education (FLE), sex education, and suitable family planning services. The Nairobi Forward Looking strategies for Advancement of Women adopted in 1985 also identified adolescent girls as a significant group at risk of unwanted pregnancy, and therefore in special need of government attention. Adolescents have a right to: whether or not to be sexually active, information, contraception, protection from diseases, confidentiality and to be able to trust and rely on those who offer to help them (NCPD, 1996).

1.3 Adolescents Knowledge and Communication of Reproductive Health.

Adolescents have little knowledge on reproductive health. In Kenya 53.8% of boys and 69.8% of girls aged 15 - 19 years had no contraceptive knowledge (Njau et al., 1996). The widespread lack of knowledge of reproductive health among young adolescents prevents many from protection or seeking help from health services. They may not be given information due to policy or embarrassment of the care provider (UNFPA, 1996). Better
communication about sexuality, gender relation and avoidance of unwanted pregnancy and sexually transmitted diseases is essential to improving young people’s life option. Educating young people in factual terms about immediate and long-term effects of their behaviour choices enables them to make responsible decisions. Families are still the strongest influence on adolescent behaviour and choices. The attitudes of parents and older generations are crucial in promoting health and equal relationship between sexes. Most adolescents would like to obtain advice and support from their parents but parents often feel uneasy and uncertain about what kind of information to provide (Jaccard et al., 1996). Parents may therefore need training to help adolescents deal with health and sexuality issues. Quality of parental relationship has been suggested as the best predictor of later start to sexual activity and fewer sexual partners (Jaccard et al., 1996). Parents and children in many different cultures have problems in communicating sexual matters. Parents see sexual activity as a problem, while adolescents and service providers want to avoid pregnancy and other risks of sexual activity. Parents need to be reassured about the value of sexual and reproductive health education for adolescents, which encourages responsible ethical behaviour contrary to the popular belief that this kind of education will increase promiscuity.

1.4 Sexually Transmitted Infections (STI)

Many young people are infected with sexually transmitted infections (STI). In Machakos Kenya 57 % of the young people below 20 years had contracted STI (Mulandi, 1984). In Kenyatta National Hospital, 36 % of pregnant women aged 15 to 24 years had at least one STI (Lema et al., 1991). Inaccurate and inefficient information contributes to the spread of STI including HIV/AIDS. Among secondary school girls in Kenya 41% in 1994 did not know that people infected with HIV might not look sick. Thirty per cent did not know that condoms could minimise transmission of HIV (Youri, 1994). Adolescents have expressed a need for
more information on how to protect themselves against pregnancy, sexually transmitted
diseases including HIV/AIDS (PAK/JHPCS/PIP/PATH, 1994). Fifty two per cent of 15 to 19
years old are currently sexually active. Forty eight per cent remain abstinent (USAID, 1994).
This segment of young people is likely to initiate sexual activity within the next few years.
Their safety depends on the information given to them on reproductive health. For those who
are already sexually active the need for information and services is reflected through the high
number of youth with HIV/AIDS, unwanted pregnancy and abortion.

1.5 Research Problem

1.5.1 Statement of the problem.

Adolescence is a powerful formative time of transition to adulthood, roughly concurrent with
the second decade of life. What happens between the age of 10 and 19, whether good or bad
shapes how girls and boys live out their life as women and men, not only in the reproductive
field but in the social and economic area as well (Mensch et al., 1998).

Girls and boys in cultures throughout the world are treated differently from birth onwards and
even antenatally where selective abortion of female foetuses is practised so that at puberty this
gender gap widens (Bruce et al., 1995). In most African cultures, during adolescence boys
enjoy new privileges reserved for men while girls endure new restrictions reserved for
women. Boys gain autonomy, mobility, opportunity and powers over girls’ sexual and
reproductive lives while girls are systematically deprived of these assets (Mensch et al.,
1998). Girl’s social and economic disadvantages have many direct and indirect effects on
their reproductive behaviour and health. These disadvantages are infact the driving forces
behind early marriage and childbearing (Bos et al 1994; Singh, 1998). The age at which
females begin child bearing is largely determined by the social, economic and gender
dynamics operating in their lives. While the entire adolescents deserve our attention the needs of adolescent girls in the developing world are particularly pressing (Mensch et al., 1998).

Their wellbeing is crucial to the social cohesiveness and economic productivity of their societies. Their experience during the critical second decade of their lives shapes their future and by extension the future of the society in which they live (Mensch et al., 1998). For biological and social reasons, adolescent girls are vulnerable to more reproductive health problems than boys. These risks include morbidity and mortality related to pregnancy and other problems that affect both sexes such as HIV infection.

According to Youri (1994), in Kenyan secondary schools one third of the girls reported having had sexual intercourse and approximately 40% of these girls indicated that their first encounter was either forced or they were cheated into having sex. Whenever adolescents' knowledge of reproductive biology and health has been studied, data indicate that adolescents have minimal grasp of this biology and a limited understanding of how to prevent pregnancy and reproductive health problems (Mc Cauleys, 1995). Adolescent knowledge of reproductive health problems and how to protect against them is limited. A survey carried on Kenyan adolescents reviewed that respondents were susceptible to rumours concerning the protective effect of condoms, despite generally being aware of how HIV is transmitted. Approximately one third thought that condoms have small holes that can allow HIV to pass through and a similar proportion thought that condoms are laced with HIV (Erulkar et al., 1997). Adolescent pregnancy is a problem that needs attention. In 1994 fifty two percent of 15 to 19 years were sexually active (USAID, 1994).

Despite the recommendation for adolescents to receive adequate family life and sex education at the international Conference on teenage pregnancy in Mexico, there is a lot of resistance from the parents to allow their adolescents to be taught reproductive health in school. Parents
fear that knowledge may lead to promiscuity and they are responsibility of guiding their children, yet there is little communication between the adolescents and their parents on reproductive health. Research carried out in Central Province of Kenya showed that parents felt least knowledgeable to discuss reproductive issues of adolescents (Erulkar et al., 1998).

Since young people are sexually active their safety from adolescents’ pregnancy and STI depends on the information and services made available to them. Therefore there is need to empower parents to be able to counsel and guide their adolescents in order to prevent adolescent pregnancy and STI.

1.6 Justification

Adolescents’ pregnancy is a major concern in developing countries including Kenya. A survey done in Kenya in 1998 revealed that 45% of adolescent girls had children at age 19 (NCPD, 1998). Adolescents have little knowledge of reproductive health yet there is considerable resistance to teaching them reproductive health in school as educational authority fear parental opposition. Studies by IPPF indicate that sex education leads to delay or decrease in sexual activity (IPPF, 1995). Parents need to teach their adolescent boys and girls reproductive health, in an attempt to reduce unwanted pregnancy. If adolescent pregnancy is lowered we can reduce the high morbidity and mortality during childbirth.

The study was chosen because it constitutes one of the very important elements in the integrity of families. It embraces, in a more or less broad sense some of the problems often encountered by our modern society. With the advent of HIV/AIDS the need to address reproductive health is emphasized the more hence the selection of this study as a priority health concern cannot be over stressed.
1.7 **Hypothesis**

Maternal awareness of reproductive health practices has no impact on maternal counselling in relation to adolescent pregnancy.

1.8 **Study Objectives**

1.8.1 **General Objective**

To determine maternal awareness of reproductive health practices and maternal counselling in relation to adolescent pregnancy.

1.8.2 **Specific Objectives**

1. To assess maternal knowledge of reproductive health practices.

2. To determine whether maternal knowledge of reproductive health is associated with counselling adolescents on pregnancy.

3. To determine the association between maternal knowledge of reproductive health and adolescent pregnancy.

4. To establish whether mothers undertake counselling of adolescents on reproductive health practices.

5. To determine maternal perception on the benefits of knowledge on reproductive health practices and counselling skills.

6. To determine the effect of reproductive health knowledge on adolescents as perceived by their mothers.
CHAPTER TWO

Materials And Methods

2.1 Description of the study area

2.1.1 Topography.

Nairobi is the capital city of Kenya and is the largest city in east and central Africa. It is situated at the edge of the Athi river plains, at an altitude of about 1700 m above sea level. It covers a land area of 684 Km\(^2\) which is about 0.1% of Kenya's total (Appendix IV).

The study was conducted in Dagoretti Division, Nairobi Province situated 19\(^{1/2}\) kilometres west of Nairobi City. Dagoretti is a peri-urban slum area situated on the western most side of the Nairobi Province. The Division borders Kibera Division to the South, Westland Division to the Northeast, and Central Province to the West (Appendix V). Division Comprises of five locations but the study was concentrated in three locations (Appendix VI). The three locations have a population of 72,000 people (CBS, 1989) representing both middle and low social economic classes. The area has a great amount of immigration as squatters continue to immigrate to be nearer Nairobi or Dagoretti itself. Most families support themselves through agricultural and petty trading. The ten slaughterhouses located in Dagoretti Market employ more than 600 workers. The study area was selected because it has, like many other areas in Kenya, high teenage pregnancy (NCPD et al., 1998). A previous study in the area also showed adolescent pregnancy to be one of the major reproductive health problems pervading the area (Njenga, 1997).
2.1.2 Demographic Characteristic

Dagoretti covers an area of 32 km$^2$ and has an estimated population of 144,779 people (CBS, 1989). It is divided into five locations namely Ruthimitu-Uthiru, Riruta, Mutuini, Waithaka and Kawangware. The population density is highest in Kawangare and lowest in Mutuini.

2.1.3 Housing and living

The living conditions vary from peri-urban slums to middle class and some rural farming areas. These include few large posh fenced houses and numerous one-roomed homes. Most of the area can be described as peri-urban slums with poor dwelling but sufficient land available for many inhabitants to have small gardens. Although the area is subject to considerable influxes of persons in search of work in Nairobi, the community also holds many families, which have resided in this area for several generations.

2.1.4 Sanitation

According to a survey done in 1997, 77% of the households had latrines in good condition and 80.7% of the households had access to garbage pit (MIHV, 1997).

2.1.5 Roads and communication.

There is a tarmac road from the city centre and the area is well served by Public Service Transport e.g. Kenya bus services and Matatus.

2.1.6 Water

By 1997 access to save drinking water was available to 53% of household in urban slum area and 50% of slum dweller had adequate excreta disposal facilities (MIHV, 1997).
2.1.7 Health Facilities

The local government has provided two health facilities in Dagoretti they include Waithaka and Riruta health centres. The community has sponsored one health centre namely Kabiro while AMREF has sponsored one namely Chandaria. Also, there is a large number of private clinics owned and operated by medical personnel that offer services for a fee. There are 484 Community Health Workers including traditional birth attendants who have been trained by Non Governmental Organisations in Chandaria Health Centre.

2.1.8 Education

There are 21 primary schools, 7 secondary schools and 3 special schools. Many children enrol in primary school though there is still a large number who do not attend school.

2.2 Study population

The study was carried out on women aged 20 years and above with at least one child in the three locations of Dagoretti. The cut of age 20 years was chosen in order to exclude adolescent mothers in the sample.

Inclusion And Exclusion Criteria

Inclusion: All Consenting mothers who are 20 years and above with at least one child.

Exclusion: Mothers without children and mothers who decline to participate in the study.

2.3 Ethical consideration

Prior to the study, clearance was obtained from the Office of the President. The medical officer of Health of Nairobi was informed about the study and his Co-operation was sought. The Education Officer, Chief and Sub Chief of Dagorreti were informed. This was important because they informed the community and provided the village elders who were guiding me
and taking me to the community. The community health workers in the area were involved in order to inform the community and thus enhance acceptance. A detailed explanation of the purpose of the study was given to those involved. The nature of the study was clearly explained to participants who were recruited voluntarily after signing the consent form (Appendix I). The participants were assured that their identity would be kept confidential and that no names would be entered on the questionnaire. In order to enhance response rate respondents were assured that the interview was not a test of intelligence but a study and thus should answer the questions without fear.

To ensure complete privacy interview were conducted on one to one basis in isolated area (mostly in the houses with other members being requested to wait outside or isolated open space outside). Focus group discussions were conducted in a familiar open space where women usually held their meeting such as chiefs’ camps or community centre.

2.4 Sampling Procedure

The division has five locations. Three out of five locations were chosen on logistic reasons. The three locations had a total of five sub-locations and they were all used for the study. The five sub-locations had a total of 30 clusters that had been used for the 1999 National census. From each sub-location two clusters were randomly selected using random numbers. From these clusters household were randomly selected, the first household of a cluster was selected by use of random number. After selecting the first household the researcher moved to the next nearest household. Every 2nd household was visited and if there was a mother who satisfied the criteria she was interviewed using structured questionnaire. If the mother did not satisfy criteria, the researcher moved to the next 2nd household. Every 5th household was requested to attend focus group discussions and was not interviewed.
2.5 Study Sample Size

The sample size was calculated according to Fisher, (Fisher et al., 1998) because the study population exceeded 10,000. The sample size was derived from the relationship:

\[ N = \frac{Z^2 pq}{D^2} \]

where

\( N \) = sample size

\( p \) = proportion of the target group estimated to have a particular characteristic, hence was equal to 45% or 0.45 since adolescent pregnancy prevalence rate in the area was estimated to be 45% (NCPD et al., 1998).

\( q = 1-p = (1 - 0.45) \) which is 0.55 (Fisher et al., 1998) and

\( Z \) = is the standard deviation that is usually set at 1.96 to correspond with 95 per cent confidence limit.

Consequently, \( D \) represents the desired degree of accuracy and was set at 5%.

Hence:

\[ N = \frac{(1.96)^2 (0.45)(0.55)}{(0.05)^2} = \frac{3.8416 \times 0.450}{(0.05)^2} = \frac{0.950796}{0.0025} = 380.3184 \]

Therefore, the minimum sample size was 380 respondents.

In case of respondent drop out of the study a 10% non-response was considered and hence, the sample equals

\[ 380 + (380 \times 10\%) \]

\[ = 380 + 38 = 418 \text{ Respondents} \]
2.6 Study Design

This was descriptive cross-sectional study. Qualitative and quantitative methods of data collection were used. The study instruments were composed of structured questionnaire for the interviews and a question guide for the focus group discussions.

2.7 Study Variables

The variables that are considered in assessing the objectives and testing the hypothesis are discussed below.

2.7.1 Overall Knowledge On Reproduction Health

Overall knowledge of Reproductive health was determined by getting the mean score of family planning, fertility and sexually Transmitted infections knowledge as a percentage. Taking the mean score of those who had no individual knowledge of reproductive health and calculating the percentage assessed lack of knowledge.

2.7.2 Knowledge On Family Planning

Knowledge of family planning was estimated by asking the respondents to explain how each method of family planning she had mentioned is used. If she explained the method correctly she was considered to have knowledge on it. If she was unable to explain she was considered not to have knowledge. The mean score was taken as the total percentage knowledge of family planning.

2.7.3 Knowledge On Fertility

This was estimated by asking six questions related to conception and menstrual cycle. Mean score of all the questions answered correctly was used to determine the percentage of knowledge on fertility.
2.7.4 Knowledge On STI.

Knowledge on STI was estimated by asking seven questions based on types of STI, dangers of these infections and how they can be prevented. Mean score of all the questions answered correctly was determined and the percentage calculated as knowledge on STI.

2.7.5 Adolescent Pregnancy

Adolescent pregnancy was determined by asking the responders whether she was a mother / a guardian of an adolescent girl who became pregnancy while under her care. This was taken as a percentage of the total respondents.

2.7.6 Counselling

Counselling was determined by asking the respondent whether she has ever had discussion / counselling session related to reproductive health with her own daughters (if she had one between 10-20 years) and taken as a percentage of respondents who had adolescent daughters.

If she had ever counselled adolescent girl not related to her for all the respondents. This was taken as a percentage of the total respondents.
2.8 Focus Group Discussion

A focus group is a homogenous group of people usually (6-12) who under the guidance of a moderator discuss relevant topics to the theme of given study (Krueger, 1988). It explores people's beliefs, attitudes and opinions and also indicates the range. It is valuable for gaining baseline information for a project and it provide valuable insight into how and why people make the choices the way they do (WHO et al., 1992). The moderator uses a guide, which is fairly flexible to allow modification or pursuit of an anticipated discussion, which is pertinent to the theme of the study. The discussion is usually “focussed” on a particular area of interest. It does not usually cover a huge range of issues but allows the researcher to explorer one or two topics in greater details (WHO et al., 1992).

Participants are usually sampled purposively to reflect population variations that are of particular relevance to the researcher’s topic and they share a common characteristic, for example Age, sex and parity. This encourages a group to speak more freely about the subject without fear of being judged by others thought to be superior, more expert or more conservative (Fisher 1998; WHO et al., 1992). Focus group sessions are usually held in a neutral setting, where participants feel relaxed and free to express their views. Participants usually arouse the memories and inspire the feelings of one another leading to a deeper and fuller discussion of the problem (Krueger, 1988).
2.9 Data Collection

Familiarisation with the study area was done. The DO, Sub-Chief and village elders and community health workers were met and briefed on the study to ensure support. Data was collected using two methods FGDs and structured interviews. Structured interviews were carried out using questionnaires that afforded quantitative analysis (Appendix II). Data questionnaires were prepared in English and translated verbally in Kiswahili whenever necessary. The questionnaire featured both closed and open-ended questions as detailed in Appendix II. The questionnaire was pre-tested on 20 respondents in Kangemi an area similar to the study area. The data obtained from pilot study was used to moderate the final questionnaire. To ensure that the participants understood the questions and answered them usefully interviews were used when answering the questionnaire to enhance respondents understanding the questions and instructions. A Focus group discussions guide was used as outlined in (Appendix III). One focus group discussion was conducted from each of the three locations. FGDs were conducted in such a way that each group had at least 8 participants. The first focus group consisted of mothers who were above 40 years, while the second group consisted of mothers between 20 to 40 years and the last one was a mixture of ages within 20 to 70. The discussions were carried out in familiar open areas to them and during the discussion the proceedings were tape recorded with one of the investigator acting as an observer observing body language. A combination of the two qualitative and quantitative data collection methods were used in order to obtain accurate information, and also get explanations of the information given.

Participants in the focus group were invited from their homes. This was done to show them they are important and thus encourage them to attend. The Focus Group Discussions were scheduled between 9am and 11am because this was the time most mothers felt convenient as
children were in school and had enough time to finish housework in the morning and prepare lunch for their children after discussion. No major problem was encountered during data collection.

2.10 Data Management And Analysis

All open-ended questions were coded before data entry.

The data from questionnaires were checked and cleaned, then entered into a computer using SPSS for windows (Version 8.0, Chicago Illinois, USA).

In the quantitative data descriptive statistics which included standard deviation, mean, mode and median was used initially to check the typical characteristics of the data. Those of interest were mean age of the respondents, average level of education, Knowledge of reproductive health. Cross tabulation was used to assess association between variables.

Chi - squares was determined to measure statistical relationship between variables such as knowledge on reproductive health of the mother and actual counselling, mothers’ level of education and counselling. Data for knowledge on different type of contraceptives, respondents feeling on the best person to counsel adolescents were shown using frequency tables.

Multivariate analysis was done to prevent independent variable confounding each other and also to determine the probability. The qualitative data from the focus group was transcribed and a summary written. The results from the FGDs were collaborated with the results from structured questionnaire. Similarities and disparities were described.
CHAPTER THREE

Results

Socio-economic and demographic characteristics are known to influence maternal knowledge of reproductive health, maternal counselling and also adolescent pregnancy (UNICEF 1993, NCPD, 1994). These factors overall affect the objectives of this study. Hence, the socio-economic and demographic characteristic of the study population were assessed and described as in part 3.1 below.

Overall the results show that knowledge of reproductive health was influenced by age and number of children while adolescent pregnancy was influenced by the education level and number of children. Adolescent counselling was affected by educational level, age and number of children.

3.1 Socio-economic and Demographic Characteristics.

A Sample of 478 respondents was recruited and interviewed in almost equal numbers from three different locations of Dagorretti, namely Mutu-ini (144), Waithaka (164) and Uthiru-Ruthimitu (170). Out of this sample, 78.5% respondents were married and aged between 20-70 years and majority of them (67.8 %) were in the age group 20 –29 years with mean age of 28 ± 7.5 (Table 1). The number of children per respondent ranged from 1 – 9 and a mean of 2.2 ± 1.3 with majority of them (67.2 %) having 1 – 2 children. Further, 71.9% respondents had at least one daughter of whom 90.4 % were below 19 years. The age of the oldest daughter ranged between 1 – 40 years with a mean of 8.8 ± 7.6. Over one half, (51.9 %) of the respondents lived in two roomed houses together with their children and only 28.9 % could afford three rooms and above (Table 1). In terms of religion, Protestants were the most comprising of 60.7% while 30.7%, 4.4%, 2.9 % and 1.3 % respondents were Catholics, Traditionalists, Muslims and Atheists respectively (Table 1).
Table 1: Respondent Socio-economic and Demographic Characteristics

<table>
<thead>
<tr>
<th>Socio-Demographic Factors</th>
<th>Respondents</th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number (n)</td>
<td>%</td>
<td>(N/478)</td>
</tr>
<tr>
<td><strong>Age Distribution</strong></td>
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<tr>
<td>20-29</td>
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</tr>
<tr>
<td>30-39</td>
<td>123</td>
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<tr>
<td>40-49</td>
<td>19</td>
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<td><strong>Religion affiliation</strong></td>
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<tr>
<td>Protestants</td>
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<tr>
<td>Catholics</td>
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<tr>
<td>Muslims</td>
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<tr>
<td>Traditionalists</td>
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<tr>
<td>Atheist</td>
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</tr>
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<td></td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
<td>Two</td>
<td>146</td>
<td>30.6</td>
<td></td>
</tr>
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<td>Three</td>
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<td></td>
</tr>
<tr>
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<tr>
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<td></td>
</tr>
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<td><strong>Occupation</strong></td>
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<tr>
<td>Self employed</td>
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</tr>
<tr>
<td>Professionals /Employed</td>
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<td>11.5</td>
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<tr>
<td>One room</td>
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</tr>
<tr>
<td>Two rooms</td>
<td>248</td>
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<td></td>
</tr>
<tr>
<td>&gt; Three rooms</td>
<td>148</td>
<td>28.9</td>
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<td>Kambas</td>
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</tr>
<tr>
<td>Luo</td>
<td>30</td>
<td>6.3</td>
<td></td>
</tr>
<tr>
<td>Kissis, masaiis etc</td>
<td>28</td>
<td>5.9</td>
<td></td>
</tr>
</tbody>
</table>

*Separ / Win / Div – Separated / Windowed / Divorced.
It was also found that most respondents (52.9%) had attended primary school while 41% had completed secondary education and the rest (6.1%) had attended college and above. However, most respondents (68%) were housewives while 20.5% were self-employed and only 11.5% of them had regular employment or were professionals (Table 1).

When education and age were cross-tabulated out of 253 respondents who had primary education, 52.2% were in age group 20-29 and 26.2% in age group 30-39. For the 196 respondents with secondary education, 73.5% respondents were in age group 20-29 and 23.5% in age group 30-39. Of those 29 respondents with college education, 69% were in age group 20-29 and 20.7% were in age group 30-39. Statistically there was a significant negative association between level of education and age ($\chi^2 = 72.2$, $p = 0.001$) such that level of education increased with decrease in age, suggesting that those who were young were more educated (Table 2).

When education and number of children were considered, among the 253 respondents with primary education, 36% had one child and 25.7% two children. For the 196 respondents with secondary education, 38.3% had one child and 35.7% had two children. Of the 29 respondents with college and above, 34.5% had one child and 41.3% had two children. Statistically there was a significant negative association between education and number of children ($\chi^2 = 52.1$, $p = 0.001$) such that number of children decreased with increase in education level (Table 2).

When education and marriage were considered among the 253 respondents with primary education, 80.2% were married and 13.5% were single. Of those 196 respondents had secondary education, 76.9% were married and 20.5% were single. Of the 29 respondents with college education and above, 75.9% were married and 20.7% were single. There was a statistical significant positive association between education and marriage ($\chi^2 = 13.4$, $p = 0.03$) such that marriage increased with education (Table 2).
When education and occupation were considered among the 253 respondents with primary education, 76% were housewives only and 20.5% were self-employed. Of the 196 respondents who had secondary education, 62% were housewives only and 22.1% were self-employed. Of the 29 respondents who had college education, 63.2% were professionals/employed and 26.3% were housewives only. There was a significant positive association between education and occupation ($\chi^2 = 71.8$, $p = 0.0001$), suggesting that education enhances occupation opportunities (Table 2).

When occupation and marriage was considered, out of 325 respondents who were housewives only, 83.4% were married and 12% were singles. For those respondents who were self-employed, 65.3% were married and 27.6% were singles. For those 55 respondents who were professionals/employed, 74.5% were married and 25.5% were singles. There was a statistically significant positive association between occupation and marriage ($\chi^2 = 18.0$, $p = 0.001$) (Table 2).

When occupation and age was considered, out of 325 respondents who were housewives only, 69% were in age group 20-29 and 23.9% were in age 30-39. For the 98 respondents who were self-employed, 62.2% were in age 20-29 and 30.6% were in age 30-39. For the 55 respondents who were professionals/employed, 68.6% were in age 20-29 and 29.4% were in age 30-39. Occupation and age were not statistically significant (Table 2).

Considering occupation and number of children of the 325 respondents who were housewives only, 35.9% had one child and 30.1% had two children. For the 98 who were self-employed, 39.8% had one child and 23.5% had two children. For the 55 who were professionals/employed, 33.3% had one child and 48.1% had two children. Occupation and number of children were not statistically significant (Table 2).
Table 2: Relationship Between Socio-economic And Demographic Characteristics

<table>
<thead>
<tr>
<th>Factors</th>
<th>Primary</th>
<th>Secondary</th>
<th>College above</th>
<th>And</th>
<th>Statistics</th>
</tr>
</thead>
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<tr>
<td><strong>EDUCATION</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>20-29</td>
<td>132</td>
<td>52.2</td>
<td>144</td>
<td>73.5</td>
<td>20</td>
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<tr>
<td>30-39</td>
<td>66</td>
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<td>46</td>
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<td>6</td>
</tr>
<tr>
<td>&gt; 40</td>
<td>55</td>
<td>21.6</td>
<td>6</td>
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<td>3</td>
</tr>
<tr>
<td><strong>Number of children</strong></td>
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<td>91</td>
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<td>75</td>
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</tr>
<tr>
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<td>&gt; 4</td>
<td>44</td>
<td>17</td>
<td>18</td>
<td>9</td>
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<td>34</td>
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<td>20.5</td>
<td>6</td>
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<td>*Separ/Win/Div</td>
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<td><strong>Occupation</strong></td>
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<td></td>
<td></td>
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<tr>
<td>Housewives only</td>
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<td>76</td>
<td>122</td>
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<td>8</td>
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<td>Self employed</td>
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<tr>
<td>Professionals / Employed</td>
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<td>3.5</td>
<td>40</td>
<td>15.1</td>
<td>18</td>
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<table>
<thead>
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<th>Factors</th>
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<th>Self employed</th>
<th>Employed / Professional</th>
<th>Statistics</th>
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<td><strong>OCCUPATION</strong></td>
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<tr>
<td><strong>Marital status</strong></td>
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</tr>
<tr>
<td>Married</td>
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<td>65.3</td>
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<tr>
<td>Single</td>
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<td>12</td>
<td>27</td>
<td>27.6</td>
</tr>
<tr>
<td>*Separ/Win/Div</td>
<td>15</td>
<td>4.6</td>
<td>7</td>
<td>7.1</td>
</tr>
<tr>
<td><strong>Age</strong></td>
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<td></td>
</tr>
<tr>
<td>20-29</td>
<td>224</td>
<td>69</td>
<td>61</td>
<td>62.2</td>
</tr>
<tr>
<td>30-39</td>
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<td>30.6</td>
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<tr>
<td>&gt; 40</td>
<td>23</td>
<td>7.1</td>
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<td>7.2</td>
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<td>13.8</td>
<td>12</td>
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</tbody>
</table>

*Separ / Win / Div - Separated / Windowed / Divorced.*
3.2 Reproductive Health Knowledge

Reproductive health knowledge was assessed on three areas namely family planning, fertility and sexually transmitted infections as outlined in Appendix II Part 2 A-C. Knowledge on sexually transmitted infections (STI) was found to be high among respondents with 92.7% aware of these infections (Figure 1). Family planning knowledge was found in 61% respondents while knowledge of fertility was the least among the three 56.3% (Figure 1). Overall, Reproductive health knowledge was high 70 % among the respondents.

3.2.1 Family Planning Knowledge

Knowledge on family planning was assessed as outlined in Appendix II Part 2 A. Almost all the respondents (99.6%) had heard about family planning (Table 3). A large number of respondents (98.5%) were able to mentioned pills, (98.1%) injections and (95.6%) condoms while IUCD, tubal ligation, Natural and Norplant methods were mentioned by 93.7%, 85.1%, 84.5% and 80.5% respectively (Table 3). However, fewer respondents mentioned vasectomy (66.9%), withdrawal method (58.6%) and diaphragm (51.3%).

Majority of the respondents were able to explain how the following family planning methods are used. Pills (94.4%), condoms (91.4%) and injections (89.9%) while IUCD was explained by 66.7%, Norplant 50.1% and tubal ligation 43%, despite being mentioned by a higher number of respondents (Table 3). Few respondents were able to explain diaphragm (26.5%), and vasectomy (21.9%) as compared to the other methods. On average 81.3% mentioned methods of family planning but only 61% of the respondents could explain how the methods are used while 39% could not explain any method.
Figure 1: Knowledge of Reproductive health

Knowledge of FP (61%), Knowledge of fertility (56.3%), Knowledge of STI (92.7%)

N = 478
When socio-economic and demographic characteristics were considered and cross tabulation analysis done there was a significant positive association between knowledge of family planning and age ($\chi^2 = 21.9 \ p = 0.038$), educational level ($\chi^2 = 33.8 \ p = 0.0001$) and respondents occupation ($\chi^2 = 19.7 \ p = 0.011$). However family planning knowledge was not statistically significant with religion, marital status or number of children.

3.2.2. Knowledge On Fertility

Knowledge on fertility was assessed as outlined in appendix II part 2 B. Fifty six point three percent respondents had knowledge on fertility while 43.7 % had no knowledge (Table 4). Majority of the respondents (93.1%) knew that conception could occur if a woman had intercourse for the first time, while 77.1% knew that conception could occur even if a woman cleans herself after sexual intercourse. Around eighty percent were aware that pregnancy could occur if the periods were irregular. Forty three point three percent respondent knew that a woman could get pregnant if a man uses withdrawal method while 34.3% knew conception could occur before a girl starts menstruation. In terms of menstrual cycle, only 18.4% of the respondents knew pregnancy is likely to occur at the middle of menstrual cycle, further, Out of the 88 respondents who knew, 58.2% were able to advance reason why conception should occur at the middle of the menstrual cycle (Table 4).

When socio-economic and demographic characteristics were considered and cross tabulation analysis done knowledge of fertility was significant positive associated with education level ($\chi^2 = 17.6 \ p = 0.03$) and not any other factor.
Table 3: Respondents Knowledge Of Family Planning Methods.

<table>
<thead>
<tr>
<th>Methods Of Family Planning</th>
<th>Knowledge Level</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Respondents</td>
<td>Able To Mention Method</td>
<td>Able To Explain Method</td>
<td>Unable To Explain Method</td>
</tr>
<tr>
<td></td>
<td>Number* (% n/478)</td>
<td>Number* (% n/478)</td>
<td>Number* (% n/478)</td>
<td></td>
</tr>
<tr>
<td>Pills</td>
<td>471 (98.5)</td>
<td>451 (94.4)</td>
<td>27 (5.6)</td>
<td></td>
</tr>
<tr>
<td>IUCD</td>
<td>448 (93.7)</td>
<td>319 (66.7)</td>
<td>159 (33.3)</td>
<td></td>
</tr>
<tr>
<td>Injection</td>
<td>469 (98.1)</td>
<td>430 (89.9)</td>
<td>48 (10.1)</td>
<td></td>
</tr>
<tr>
<td>Diaphragm</td>
<td>245 (51.3)</td>
<td>127 (26.9)</td>
<td>351 (73.5)</td>
<td></td>
</tr>
<tr>
<td>Condom</td>
<td>457 (95.6)</td>
<td>437 (91.4)</td>
<td>41 (8.6)</td>
<td></td>
</tr>
<tr>
<td>Tubal Ligation</td>
<td>407 (85.1)</td>
<td>206 (43.0)</td>
<td>272 (57.0)</td>
<td></td>
</tr>
<tr>
<td>Norplant</td>
<td>385 (80.5)</td>
<td>239 (50.0)</td>
<td>239 (50.0)</td>
<td></td>
</tr>
<tr>
<td>Vasectomy</td>
<td>320 (66.9)</td>
<td>105 (21.9)</td>
<td>373 (78.1)</td>
<td></td>
</tr>
<tr>
<td>Natural</td>
<td>404 (84.5)</td>
<td>359 (75.2)</td>
<td>119 (24.8)</td>
<td></td>
</tr>
<tr>
<td>Withdrawal</td>
<td>280 (58.6)</td>
<td>241 (50.4)</td>
<td>237 (49.6)</td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>389 (81.3)</td>
<td>292 (61.0)</td>
<td>186 (39.0)</td>
<td></td>
</tr>
</tbody>
</table>

* Number = n

Table 4: Respondents Knowledge Of Fertility

<table>
<thead>
<tr>
<th>Circumstances/Time When Conception Can Occur</th>
<th>Fertility Knowledge Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Had knowledge Number (n) %n/478</td>
</tr>
<tr>
<td>When Withdrawal method is used</td>
<td>207 (43.3)</td>
</tr>
<tr>
<td>A woman cleans herself after sex</td>
<td>369 (77.1)</td>
</tr>
<tr>
<td>Sexual Intercourse first time</td>
<td>445 (93.1)</td>
</tr>
<tr>
<td>When periods are Irregular</td>
<td>344 (71.9)</td>
</tr>
<tr>
<td>Before menstruation starts</td>
<td>164 (34.3)</td>
</tr>
<tr>
<td>At the middle of menstrual cycle</td>
<td>88 (18.4)</td>
</tr>
<tr>
<td>Average</td>
<td>269 (56.3)</td>
</tr>
</tbody>
</table>
3.2.3 Knowledge On Sexually Transmitted Infections

Knowledge on Sexually transmitted Infections was assessed as outlined in Appendix II Part 2 C. Majority of the respondents (99.4 %) had heard of sexually transmitted infections (STI) (Table 5). Knowledge of STI among respondents was high (93.7%) with only 6.3% respondents having no knowledge. Knowledge of STI was based on whether the respondents could list at least three major sexually transmitted infections, mention the dangers of STI and explain or mention preventive measures for STI. Ninety eight point five percent of the respondents were able to list HIV/AIDS, Syphilis and Gonorrhoea as examples of STI. Around 80% knew that one cannot identify a person with STI while 93.3% knew that a healthy person could have AIDS.

On prevention 95.6% respondents knew that STI is preventable and 94.8 % knew how to prevent it using different methods. Majority, (84.1%) of respondents knew that condom is a family planning method that can prevent STI but only 19.2% said they could use it to prevent STI. Majority (74%) mentioned sticking to one partner as the method they would use to prevent STI. Fifty five percent respondents listed dangers of STI on both treatment and procreation as being embarrassing to treat while 54% said it causes infertility (Table 5).

When socio-economic and demographic characteristics were considered there was a significant positive association between knowledge of STI and each of the following variables: level of education ($\chi^2 = 33.8, p = 0.0003$) and age ($\chi^2 = 16, p = 0.046$) such that the higher the education level and the older the person the higher the knowledge of STI. Knowledge of STI was not statistically significant with any of the following variables religion, marital status, number of children or occupation.
Table 5: Respondents Knowledge On Sexually Transmitted Infections

<table>
<thead>
<tr>
<th>Knowledge of STI</th>
<th>Had Knowledge</th>
<th>No Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type Of Knowledge</td>
<td>Number (n) % (n/478)</td>
<td>Number (n) % n/478</td>
</tr>
<tr>
<td>Ever heard of STI</td>
<td>475 (99.4)</td>
<td>3 (0.6)</td>
</tr>
<tr>
<td>Mentioned HIV/AIDS, Gonorrhoea, Syphilis</td>
<td>471 (98.5)</td>
<td>17 (1.5)</td>
</tr>
<tr>
<td>Can identify someone with STI</td>
<td>382 (79.9)</td>
<td>96 (20.1)</td>
</tr>
<tr>
<td>A healthy person can have AIDS</td>
<td>446 (93.3)</td>
<td>32 (6.7)</td>
</tr>
<tr>
<td>Dangers of STI On treatment</td>
<td>453 (94.8)</td>
<td>25 (5.2)</td>
</tr>
<tr>
<td>Dangers Of STI On Procreation</td>
<td>446 (93.3)</td>
<td>32 (6.7)</td>
</tr>
<tr>
<td>Condom contraceptive prevents STI</td>
<td>402 (84.1)</td>
<td>109 (22.8)</td>
</tr>
<tr>
<td>Knew STI is preventable</td>
<td>457 (95.6)</td>
<td>21 (4.4)</td>
</tr>
<tr>
<td>Knew how to prevent STI</td>
<td>453 (94.8)</td>
<td>25 (5.2)</td>
</tr>
<tr>
<td>Average</td>
<td>443 (92.7)</td>
<td>35 (7.3)</td>
</tr>
</tbody>
</table>
3.3 Practice, Attitudes And Beliefs On Family Planning.

Practice, attitudes and beliefs of family planning were assessed as outlined in Appendix 11 Part 3. Majority of the respondents were using family planning methods while attitudes and beliefs varied depending on the method.

3.3.1 Practice Of Family Planning

Out of 478 respondents interviewed 71.5 % were using family planning methods during the study while 28.5 % were not (Figure 2). Eighty eight percent respondents had used modern methods of family planning before but only 60.6 % had attended family planning clinics for any service during the last one-year before the study. Seventy five point two percent were planning to use family planning in future.

For those who had ever practiced family planning before 25 % had started before 19 years, 12% before the conception of the first baby and 52.3% after the delivery of the first baby (Figure 2). Eighty nine point two percent mentioned health facility as the place where they would get contraceptives. Ninety five point five percent of those who had used contraceptives for the first time got them from a health facility. Most respondents (84.3%) thought that it was not hard to obtain a contraceptive while 2.7% thought it was and 13% were unsure.

When socio-economic and demographic characteristic was cross -tabulated with practice of family planning there was significant negative association between age and practice of family planning. Practice decreased with increase in age ($\chi^2 = 40, p = 0.0001$). There was significant positive association between marital status and family planning practice ($\chi^2 = 17, p = 0.002$) such that practice increased with marriage. There was no statistical significant between practice and any other variables.
Figure 2: Respondents Practice Of Family Planning
3.3.2 Attitudes And Beliefs Towards Family Planning

Out of 478 respondents interviewed 95.6% approved use of family planning methods, 1.7% did not and 2.7% were not sure (Table 6). For 377 cases who were married, 90.7% of the respondents’ husbands approved family planning methods, while 9.3% did not. Seventy seven point six percent of their religion approved family planning, 19.5% did not and 2.9% were not sure. Majority of the respondents (95.6%) felt that family planning was necessary while 2.1% thought it was not while 2.3% were unsure.

Respondent’s approval of modern method of family planning depended on the particular method. Majority of the respondents (68%) advocated use of hormonal contraceptives that is injections and pills but only 31.2% advocated use of coil (IUCD) as an ideal method. Forty four point eight percent respondents recommended tubal ligation for women after child bearing while only 19% recommended vasectomy for men. Use of Condoms by husbands / partners was recommended by 50.2% only (Table 6).

In focus group discussion respondents felt that pills causes infertility if taken for along time before the woman has given birth. Injections were also not recommended in this group because they were said to reduce libido and decrease fertility while condoms were said to be unreliable and increases immorality.
Table 6: Respondent Opinion On Family Planning Practice And Use Of Specific Methods

<table>
<thead>
<tr>
<th>Opinion /Perceived Opinion of</th>
<th>Opinion On Family Planning Practice</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Approve Number(n) % (n/478)</td>
<td>Disapprove Number(n) % (n/478)</td>
<td>Unsure Number (n) % (n/478)</td>
<td></td>
</tr>
<tr>
<td>Respondents</td>
<td>457 (95.6)</td>
<td>8 (1.7)</td>
<td>13 (2.7)</td>
<td></td>
</tr>
<tr>
<td>Husband/partner</td>
<td>342 (90.7)</td>
<td>35 (9.3)</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Religion Affiliation</td>
<td>371 (77.6)</td>
<td>93 (19.5)</td>
<td>14 (2.9)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Respondents Opinion On Use Of Specific Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type Of Family Planning</td>
</tr>
<tr>
<td>Condoms</td>
</tr>
<tr>
<td>Vasectomy</td>
</tr>
<tr>
<td>Tubal ligation</td>
</tr>
<tr>
<td>IUCD</td>
</tr>
<tr>
<td>Hormonal (Injections &amp; pills)</td>
</tr>
</tbody>
</table>
3.4 Adolescent Pregnancy

3.4.1 Knowledge Of Adolescent Pregnancy

Adolescent pregnancy knowledge was assessed as outlined in Appendix 11 Part 4. Of the 478 respondents who were interviewed all of them had heard of adolescent pregnancy and 60.7% knew the correct definition of adolescent pregnancy. Forty-four percent of the respondents each reported being a mother or a guardian of an adolescent who had become pregnant while under their care (Figure 3). Out of those 212 adolescents who had become pregnant only 41% had been counselled before conceiving while 59% had not. Of those who were pregnant 47.2% had conceived at age 14 and below while 50.9% had conceived between age 15 to 19 and 1.9% were unsure of their age at conception. Asked what factors contribute to adolescent pregnancy 31% of the respondents mentioned lack of guidance and counselling from parents while 22% lack of knowledge of reproductive health, 25% exposure to immorality by media, 11% peer pressure while poverty was mentioned by only 11% (Figure 4).

On prevention, 87.4% respondents gave guidance and counselling as the main prevention tool. In FGD eradication of poverty and counselling of adolescents by the parents and teachers were mentioned. In this group respondents felt that girls should not attend mixed schools. Majority of the respondents felt adolescent pregnancy was a problem because it leads to poverty in the country (51.3%), adolescents dropping out of school (13.8%), illegitimate children (11.9%), poor development in the country (9.4%) and children being a burden to the parents (2.7%) while 10.9% were unsure (Figure 5). Illegitimate children were also mentioned as a problem in FGDs. Other reasons included the girl becoming a burden to the parents as one participant mentioned: "The girl becomes a burden to the parents because she cannot even be able to feed herself leave alone the baby," Mutu-ini participant.
Figure 3: Adolescent Pregnancy Among The Respondents
Lack of guidance and counselling.
Lack of knowledge.
Peer pressure.
Exposure to immorality.
Poverty.

Figure 4: Factors Contributing To Adolescent Pregnancy
Figure 5: Why Respondents Feel Adolescent pregnancy is a Problem
On medical problems associated with adolescent pregnancy respondents were well informed, 44.4% mentioned obstructed labour, 17.2% excessive bleeding, 20.5% delayed labour, 12.3% high blood pressure and only 5.6% did not know any (Table 7). In FGD all the groups were able to mention obstructed labour as the main problem associated with adolescent pregnancy.

On the social problems associated with adolescent pregnancy, poor socio-economic situations in a country was mentioned by most respondents (49.8%), lack of education (29.7%), unable to bring up the baby (9%), rejection by parents (6.7%), rejection by the community (3.3%) and only 1.5% did not mention any (Table 7).

When the respondents were asked their opinion of the persons responsible of increase in adolescent pregnancy 50% thought it was the parents, 40.6 % the adolescents themselves 6.1% community, 2.7% the government and only 0.6% blamed all the 4 groups (Figure 6). However, there was no significant association between knowledge and person responsible of adolescent pregnancy.

Adolescents' pregnancy is still associated with parents failing to counsel their children. By providing the necessary knowledge and counselling skills parents would be able to counsel their children.
Table 7: Respondents Knowledge on Problems Associated With Adolescent Pregnancy

<table>
<thead>
<tr>
<th>Problems associated with Adolescent pregnancy</th>
<th>Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number (n)</td>
</tr>
<tr>
<td>Medical</td>
<td></td>
</tr>
<tr>
<td>Obstructed delivery</td>
<td>212</td>
</tr>
<tr>
<td>Delayed labour</td>
<td>98</td>
</tr>
<tr>
<td>Excessive bleeding</td>
<td>82</td>
</tr>
<tr>
<td>High blood pressure</td>
<td>59</td>
</tr>
<tr>
<td>Don’t know</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>478</td>
</tr>
<tr>
<td>Social</td>
<td></td>
</tr>
<tr>
<td>Socio-economic</td>
<td>238</td>
</tr>
<tr>
<td>Termination of Education</td>
<td>142</td>
</tr>
<tr>
<td>Unable to bring up the baby</td>
<td>43</td>
</tr>
<tr>
<td>Rejection by parents</td>
<td>32</td>
</tr>
<tr>
<td>Don’t know</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>478</td>
</tr>
</tbody>
</table>
Figure 6: Respondents View On the Group to Blame For Adolescent Pregnancy

- Community
- Adolescent
- Government
- Parent
- All

N = 478
3.4.2 Respondent’s Behaviour Towards Adolescent Pregnancy

When respondents' behaviour towards adolescent pregnancy was assessed, 97.4% of the respondents would support their daughters in case of adolescent pregnancy. Eighty point five percent would allow their daughters to go back to school after delivery in order to get a better future but only 66.6% of these were ready to stay with the grandchild to allow the daughter to go back to school.

In FGD the respondents felt that girls should be allowed to go back to school after pregnancy if they are willing because the pregnancy could have occurred by bad luck. They felt that they should be counselled properly before resuming school to prevent pregnancy occurring again.

On abortion majority (94.6%) respondents did not recommend induced abortion in case of adolescent pregnancy and only 5.4% thought this would allow the girl to finish school. On Female Genital Mutilation majority (90.8%) respondents said it does not decrease adolescent pregnancy.

3.4.3 Respondents Attitude Towards Adolescent Use Of Contraceptives

This was assessed as outlined in Appendix 11 Part 4. Few respondents approved use of contraceptives by both the daughter and the adolescent not related to them 31% and 33% respectively. For those who approved use of contraceptives by adolescents the main reason given was prevention of pregnancy and STI. Sixty nine percent of the respondents did not approve use of contraceptive by their adolescent daughter while 67% did not for adolescents not related to them. However, respondents seemed to differ on reasons for not approving contraceptive use for the adolescent daughter and adolescent not related to them. To the daughter fear of infertility seemed to be the main reason (34.7%) as compared to unrelated adolescent (16.7 %). In adolescent not related to them the main reason was immorality being
encouraged by use of contraceptives (22.8%) as compared to the adolescent daughter (17.8%). Others reasons mentioned why adolescents should not use contraceptives include side effects and the fact that the adolescents are still young.

Majority of the respondents (76.1%) felt that adolescents should use contraceptives after delivery or marriage while 14.4% felt that they should use if sexually active, yet 82.6% knew that adolescents use contraceptives without having delivered or married.

In FGD, the respondents felt that adolescents should not be allowed access to family planning but they should abstain from sex in order to prevent STI. The respondents belief that STI cannot be prevented by all family planning methods, including condoms as one participant from Mutu-ini put it, “other people want to make you suffer and can make a hole in the condom to ensure you get either the disease or pregnancy”. In FGD condoms were not recommended as a means of preventing STI or pregnancy. This was associated with condoms being misused and the fact that respondents do not belief they are durable. Another participant felt that allowing adolescents to use contraceptives is like giving them a license to practice sex. As she put it “allowing adolescents to use contraceptives is like telling them to go and practice sex and take contraceptive not to get pregnant. Those contraceptives should not even be sold in private clinic”. The participants in the focus group felt that contraceptives should be used strictly by those who are married as they felt that sex is strictly for the married.
3.4.4 Factors Associated With Adolescent Pregnancy.

To find out factors associated with adolescent pregnancy, knowledge of reproductive health, socio-economic and demographic characteristics were considered and cross tabulation done and chi-square determined.

Knowledge of reproductive health was not significant associated with the presence of adolescent pregnancy. Practice of family planning was also not significant associated with adolescent pregnancy. Adolescent pregnancy was found to be significant negatively associated with education level ($\chi^2 = 11.4 \ p = 0.009$), occupation ($\chi^2 =20.9 \ p = 0.0003$), religion ($\chi^2 =18.9 \ p = 0.018$), but significant positively associated with number of children ($\chi^2 =13.9 \ p = 0.007$). There was no statistical significance association between the presence of adolescent pregnancy and the respondents' age or marital status.
3.5 Counselling

3.5.1 Counselling Of Adolescents On Reproductive Health Practices

Counselling of adolescents on reproductive health was assessed as outlined in Appendix 11 Part 5. Out of 478 respondents 59.9% reported having had counselling related to reproductive health with unrelated adolescent, while 40% had not. Out of 240 respondents who had adolescent daughters only 30.8% had counselled them while 69.2% had not (Figure 7).

Of the 286 who had had counselling sessions with adolescent girls 26.9% had discussed family planning and how to avoid pregnancy, 45.8% STI/ HIV/AIDS, 8.4% sexual intercourse and relationships, 5.3% safe and unsafe days while the rest 15.1% had discussed other topics such as menstrual cycle and body changes during puberty.

Of the 192 respondents who had never had any counselling sessions with any adolescent girl 59.8% said they felt uncomfortable on the topics, 15.5% lacked the knowledge of reproductive health, 16.1% lacked chance or time and 8.6% had no one to counsel.

In FGDs those who had never counselled an adolescent felt that the main barrier to effective counselling was lack of respect from adolescents not related to them so that one can only counsel her own daughter in which case the mother is likely to feel uncomfortable. One respondents confirmed this when she said “You can only talk to your own daughter the respect which used to be there when we lived in communities is no longer there and children no longer listen to everybody, they feel you have no right of guiding or counselling them”. Others felt that adolescents have more knowledge than them, “They know more than we know they are taught in school.”

Others said that they find it impossible to counsel because they are not free with adolescent.

However they felt that it is important to counsel adolescents so that in case the pregnancy occurs they do not have to blame the parents.
Figure 7: Respondents Counselling Of Adolescents

<table>
<thead>
<tr>
<th>Type Of Adolescents</th>
<th>N</th>
<th>% Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>N = 240</td>
<td>30.8</td>
<td></td>
</tr>
<tr>
<td>own daughter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N = 478</td>
<td>59.9</td>
<td></td>
</tr>
<tr>
<td>Unrelated adolescent</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3.5.2 Knowledge Level And Information Required For Effective Counselling.
Respondent’s knowledge on counselling and information they would require for effective counselling was assessed as outlined in Appendix 11 Part 5. Sixty four point nine percent thought they did not have enough knowledge and skills to guide and counsel adolescents and only 35.1% thought they had. On the information they require to counsel effectively, it was found that 19% respondents required information on STI/HIV/AIDS, 35.6% needed guidance and counselling skills, 12.8% required knowledge on family planning methods and their use, 31.2% reproductive health knowledge, 0.6% all reproductive health including counselling skills and only 0.8% needed no information (Table 8). Most (30.8%) respondents reported fertility knowledge as the topic they find difficult to handle followed by sexually transmitted diseases (25.4%), Family planning (14.9%), Sexual intercourse (10.2%) and reproductive health in general (3.3%). Only 7.7% respondents did not find any topic hard to discuss while 7.7% were unable to approach counselling.

3.5.3 Respondents Opinion On Effective Adolescent Girls Counsellor
Majority of the respondents (68.7%) mentioned parents as the most effective counsellors, followed by medical personnel (14.6%), teachers (10.7%), peers (2.7%), preachers (1.5%) and others e.g. sisters and aunts (1.8%) (Table 8).
Among the parents, most respondents (86.6%) mentioned mothers as the best persons to counsel adolescent daughters. Reasons for mentioning mothers were that they have experience and skills (42.5%) while 32.6% said they are closer to adolescents, 14.7% felt they had a lot of time together and only 6.5% said they are biologically alike while 3.6% thought it was mothers’ role culturally.
Table 8: Respondent’s Knowledge On Counselling, Information Required For Effective Counselling And The Persons Recommended To Counsel Adolescent Girls.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Respondents</th>
<th>% (n /478)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Felt they had enough knowledge</td>
<td>168 (35.1)</td>
<td></td>
</tr>
<tr>
<td>Felt they did not have enough knowledge</td>
<td>310 (64.9)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>478 (100)</td>
<td></td>
</tr>
</tbody>
</table>

Information Required for effective counselling

<table>
<thead>
<tr>
<th>Information Required for effective counselling</th>
<th>Number (n)</th>
<th>% (n /478)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RH knowledge in general</td>
<td>149 (31.2)</td>
<td></td>
</tr>
<tr>
<td>Guidance &amp; counselling skills</td>
<td>170 (35.6)</td>
<td></td>
</tr>
<tr>
<td>Family planning and how used</td>
<td>61 (12.8)</td>
<td></td>
</tr>
<tr>
<td>STI/HIV/AIDS knowledge</td>
<td>91 (19.0)</td>
<td></td>
</tr>
<tr>
<td>No information required</td>
<td>4 (0.8)</td>
<td></td>
</tr>
<tr>
<td>Both RH knowledge and counselling skills</td>
<td>3 (0.6)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>478 (100.0)</td>
<td></td>
</tr>
</tbody>
</table>

Persons Recommended To Counsel Adolescents

<table>
<thead>
<tr>
<th>Persons Recommended To Counsel Adolescents</th>
<th>Number (n)</th>
<th>% (n /478)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers</td>
<td>51 (10.7)</td>
<td></td>
</tr>
<tr>
<td>Parents</td>
<td>328 (68.7)</td>
<td></td>
</tr>
<tr>
<td>Preachers</td>
<td>7 (1.5)</td>
<td></td>
</tr>
<tr>
<td>Medical people</td>
<td>70 (14.6)</td>
<td></td>
</tr>
<tr>
<td>Peers</td>
<td>13 (2.7)</td>
<td></td>
</tr>
<tr>
<td>Other (aunt, sisters grandparents etc)</td>
<td>9 (1.9)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>478 (100.0)</td>
<td></td>
</tr>
</tbody>
</table>
Out of 405 respondents who thought fathers do not counsel adolescent daughters, 48.4% of them said that fathers felt ashamed and embarrassed to do so, 23.5% felt that it was against the culture, 5.7% felt fathers were harsh hostile and can harass adolescent girls, while 6.9% felt that they lacked knowledge and only 15.5 % felt that it was due to lack of time.

In FGDs teachers and medical people were quoted as the best groups to counsel adolescent girls on reproductive health because the adolescents were said to have respect for these people and thus are likely to listen. However, some respondents still felt that parents (mothers) have a role to play for counselling to be effective because if done in school the message given need to be emphasised at home. The respondents felt that fathers should never counsel their own daughters because it is against their culture as well as they do not have enough knowledge and experience on female reproductive physiology Others thought fathers are too shy as one participant put it “if they cannot even be able to discuss Reproductive health with their wives how are they going to do it with their daughters”

3.5.4 Respondent Opinion On Counselling Of Adolescents On Reproductive Health

When respondents were asked whether reproductive health information should be given to adolescents in school, 99.2% responded positively and only 0.8% thought they should not because they are too young and this information may lead to immorality. Of those who thought it should be taught 10.3% respondents mentioned they should start in lower primary, 76.8% in upper primary and 12.1% in secondary school (Table 9).

For adolescents who are out of school majority of the respondents felt they should be counselled before they engage in sex (40.4%), when mature enough to get pregnant (38.9%), between 10 – 18 years (11.7%), when they start having sex (7.9 %) and after marriage (1)% (Table 9).
Table 9: Respondents Opinion On Reproductive Health Counselling Of Adolescents

Being Done In School And Level Of Counselling

<table>
<thead>
<tr>
<th>Respondents attitude</th>
<th>Number (n)</th>
<th>% (n /478)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counselling in school</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approve</td>
<td>474</td>
<td>(99.2)</td>
</tr>
<tr>
<td>Disapprove</td>
<td>4</td>
<td>(0.8)</td>
</tr>
<tr>
<td>Total</td>
<td>478</td>
<td>(100.0)</td>
</tr>
<tr>
<td>Time Of Counselling In School</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower primary</td>
<td>49</td>
<td>(10.3)</td>
</tr>
<tr>
<td>Upper primary</td>
<td>367</td>
<td>(76.8)</td>
</tr>
<tr>
<td>Secondary</td>
<td>58</td>
<td>(12.1)</td>
</tr>
<tr>
<td>Not to be taught</td>
<td>4</td>
<td>(0.8)</td>
</tr>
<tr>
<td>Total</td>
<td>478</td>
<td>(100.0)</td>
</tr>
<tr>
<td>Time Of Counselling For Those Not In School</td>
<td></td>
<td></td>
</tr>
<tr>
<td>After marriage</td>
<td>5</td>
<td>(1.0)</td>
</tr>
<tr>
<td>When they start engaging in sex</td>
<td>38</td>
<td>(7.9)</td>
</tr>
<tr>
<td>When mature to get pregnant</td>
<td>186</td>
<td>(38.9)</td>
</tr>
<tr>
<td>Between 10 – 18 years</td>
<td>56</td>
<td>(11.7)</td>
</tr>
<tr>
<td>Before they start sex</td>
<td>193</td>
<td>(40.4)</td>
</tr>
</tbody>
</table>
The FGDs respondents felt that children should be taught reproductive health even when below 10 years as they become sexually active at an early age. One participant put it "I was passing near a nursery school when I saw two children a boy and a girl having sex behind the building when I called them they ran away I went and told the teacher".

3.5.5 Respondents Opinion On The Benefits Of Counselling Adolescents

Respondents' opinion on the benefits of adolescents counselling on reproductive health was assessed as outlined on Appendix 11 Part 5 question 17. Majority of the respondents (79.5%) thought adolescents who have been counselled are unlikely to get pregnant as compared to those who have not. They felt that those who have been counselled had enough knowledge and can protect themselves from pregnancy while 20.5% thought they could still get pregnant because they may be having negative attitude towards contraceptives use and could be careless in the way they use them.

3.5.6 Factors Associated With Counselling Of Adolescent Girls

To find out whether there was any statistical association between counselling and knowledge of reproductive health, counselling and practice of family planning cross tabulation was done and chi-square determined. The respondent’s reproductive health knowledge that is family planning, fertility and sexually transmitted infections had no significant association with counselling of own daughter, or adolescent girls not related to the respondent. Respondents practice of family planning was not significant associated with counselling of own daughter or adolescent girl not related to the respondent.
Counselling of both daughter and adolescent girls not related to the respondents was cross-tabulated with socio-economic and demographic characteristics and chi-square determined to find out statistical association.

Counselling of adolescent not related to the respondents was significant positive associated with age ($\chi^2 = 0.2 \ p = 0.006$) also occupation ($\chi^2 =15.3 \ p = 0.004$), while significant negative associated with number of children ($\chi^2 =11.6 \ p = 0.021$). There was no significant association between counselling of adolescent not related to the respondents and other variables.

Counselling of the own daughter was significant positive associated with age ($\chi^2 =77.9 \ p = 0.001$), educational level ($\chi^2 =21.1 \ p =0.0001$) also religion ($\chi^2 =14.3 \ p = 0.006$). However, counselling of own daughter was significant negative associated with number of children ($\chi^2 = 64.3 \ p = 0.0001$). There was no significant association between counselling of own daughter and marital status or occupation.
3.6 Multivariate Analysis (Logistic Regression)

Logistic regression analysis was carried out in order to determine the effect of each independent variable on the dependant variable while controlling for confounding and also for determining probability. Seven models of logistic regression were done. The independent variables, which included all the possible predictors such as age group, religion affiliation, education level, occupation, marital status and number of children were entered in all the seven models.

The first model of regression assessed those who had knowledge of family planning against those who did not have (Table 10 Part A). The results showed that those who had four children or more were 1.8 times more likely to have knowledge of family planning as compared to those who had one child (O.R. 1.8 $p = 0.04$). Level of education was also found to be a good predictor of family planning knowledge. Those who had college education or more were 12 times more likely to have knowledge of family planning as compared to those who had primary education (O.R 11.6, $p = 0.000$).

The second model of regression assessed those who had knowledge of fertility against those who did not. No variable was retained meaning that Knowledge of fertility was not associated with any variable. The third model assessed those who had knowledge of STI. (Table 10 Part B). Level of education was found to be a good predictor of knowledge of STI. Those who had college education were 6.5 times likely to have knowledge of STI as compared to those with primary education. (O.R. 6.57 $p = 0.014$).
Table 10: Logistic Regression Model 1, 2, 3 And 4. Respondents Knowledge Of Reproductive Health, Practice Of Family Planning And The Associated Variables

<table>
<thead>
<tr>
<th>A. Knowledge Of Family planning</th>
<th>Variable</th>
<th>Odds Ratio</th>
<th>P Value</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number Of Children</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; 4</td>
<td>1.81</td>
<td>0.038*</td>
<td>0.88 - 3.74</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>1.15</td>
<td>0.704</td>
<td>0.56 - 2.67</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>0.74</td>
<td>0.434</td>
<td>0.35 - 1.56</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

|                                 | Education level |          |         |          |
|                                 | > College       | 11.63     | 0.000** | 4.08 – 33.12 |
|                                 | Secondary       | 5.36      | 0.001** | 1.92 – 15.02 |
|                                 | Primary         | 1.00      |         |          |

<table>
<thead>
<tr>
<th>B. Knowledge Of STI</th>
<th>Education level</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&gt; College</td>
<td>6.57</td>
<td>0.014*</td>
<td>1.45 – 29.7</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td>2.94</td>
<td>0.163</td>
<td>0.65 – 13.4</td>
</tr>
<tr>
<td></td>
<td>Primary</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C. Practice Of Family Planning</th>
<th>Age Group</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&gt; 40</td>
<td>0.04</td>
<td>0.006**</td>
<td>0.01 – 0.41</td>
</tr>
<tr>
<td></td>
<td>30-39</td>
<td>0.12</td>
<td>0.002**</td>
<td>0.03 – 0.45</td>
</tr>
<tr>
<td></td>
<td>20-29</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In the Fourth model, regression assessed those who practice family planning and those who did not. (Table 10 Part C). Those who were 40 years and above were 96% less likely to practice family planning as compared to those who were in age group 20-29 years. (O. R. 0.1, p = 0.002)

In the fifth model regression assessed respondents who were mothers / guardian of pregnant adolescent as compared to those who were not (Table 11). The result showed that those who had 4 or more children were two times likely to report adolescent pregnancy as compared to those who had one child. (O.R. 2.0, p = 0.03).

When religious affiliation was assessed those in others religions were 1.9 times likely to report adolescent pregnancy as compared to those in Protestants. (O.R. 1.9, p = 0.005).

Low level of education was also a good predictor of being a parent or guardian of a pregnant adolescent. Those who had reached college and above were 70% less likely to report adolescent pregnancy as compared to those in primary (O.R 0.29, p = 0.04).
Table 11: Logistic Regression Model. Respondents Who Were Parents / Guardians Of Pregnant Adolescents And Associated Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Odd Ratios</th>
<th>P Value</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number Of Children</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥ 4</td>
<td>2.014</td>
<td>0.03*</td>
<td>1.07 - 3.79</td>
</tr>
<tr>
<td>3</td>
<td>2.185</td>
<td>0.02*</td>
<td>1.14 - 4.2</td>
</tr>
<tr>
<td>2</td>
<td>0.99</td>
<td>0.96</td>
<td>0.49 - 1.96</td>
</tr>
<tr>
<td>1</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catholics</td>
<td>0.87</td>
<td>0.72</td>
<td>0.42 - 1.82</td>
</tr>
<tr>
<td>Others</td>
<td>1.9</td>
<td>0.005**</td>
<td>1.22 - 3.02</td>
</tr>
<tr>
<td>Protestants</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education level</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥ College</td>
<td>0.29</td>
<td>0.039*</td>
<td>0.09 - 0.94</td>
</tr>
<tr>
<td>Secondary</td>
<td>0.41</td>
<td>0.137</td>
<td>0.12 - 0.33</td>
</tr>
<tr>
<td>Primary</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The sixth and seventh model assessed counselling of own adolescents' daughter and adolescents not related to the respondents respectively (Table 12 Part A).

In the sixth model those who were 40 years and above were 12.2 times more likely to counsel their own daughters as compared to those who were in age group 20–29 years (O.R 12.2, p = 0.001). Those who had reached college and above were 10.2 times more likely to counsel their own daughters as compared to those who had primary education (O.R 10.2, p = 0.011).

Those who had one child were 7.4 times likely to counsel their own daughters as compared to those who had four or more children (O.R 7.4, p = 0.007).

In the seventh model occupation was a good predictor of counselling of adolescents not related to the respondents (Table 12 Part B). Professionals/employed were 2.4 times likely to counsel the adolescent girls not related to them as compared to housewives only (O.R 2.4, p = 0.014).

Counselling of adolescents girls not related to the respondents decreased with number of children. Those who had one child were 1.4 times likely to counsel adolescents not related to them as compared to those with four or more children (O.R 1.37 p = 0.35).
Table 12: Logistic regression Model 6 and 7. Respondents Who Counselling Adolescents Girls And The Associated Variables.

### A. Counselling Of Own Adolescent Daughters

<table>
<thead>
<tr>
<th>Variable</th>
<th>Odd Ratios</th>
<th>P Value</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age Group</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; 40</td>
<td>12.2</td>
<td>0.001**</td>
<td>2.70 - 58.10</td>
</tr>
<tr>
<td>30–39</td>
<td>2.2</td>
<td>0.203</td>
<td>0.65 - 7.44</td>
</tr>
<tr>
<td>20–29</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Number of children</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>7.4</td>
<td>0.007**</td>
<td>1.72 - 31.88</td>
</tr>
<tr>
<td>2</td>
<td>2.6</td>
<td>0.12</td>
<td>0.77 - 8.90</td>
</tr>
<tr>
<td>3</td>
<td>3.0</td>
<td>0.027*</td>
<td>1.14 - 8.19</td>
</tr>
<tr>
<td>&gt; 4</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Education level</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; College</td>
<td>10.2</td>
<td>0.011*</td>
<td>1.71 - 61.1</td>
</tr>
<tr>
<td>Secondary</td>
<td>5.8</td>
<td>0.049*</td>
<td>1.01 - 33.8</td>
</tr>
<tr>
<td>Primary</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### B. Counselling Of Unrelated Adolescents

<table>
<thead>
<tr>
<th>Number of children</th>
<th>Odd Ratios</th>
<th>P Value</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.37</td>
<td>0.35</td>
<td>0.71 - 2.67</td>
</tr>
<tr>
<td>2</td>
<td>0.8</td>
<td>0.57</td>
<td>0.41 - 1.63</td>
</tr>
<tr>
<td>3</td>
<td>0.5</td>
<td>0.12</td>
<td>0.25 - 1.18</td>
</tr>
<tr>
<td>&gt; 4</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Occupation</th>
<th>P Value</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profession/employed</td>
<td>2.4</td>
<td>0.014*</td>
</tr>
<tr>
<td>Self employed</td>
<td>1.88</td>
<td>0.478</td>
</tr>
<tr>
<td>Housewives only</td>
<td>1.00</td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER FOUR

Discussion

4.1 Socio-economic and Demographic Characteristics

The study was carried out in Dagoretti Division. Maternal awareness of reproductive health practices and counselling in relation to adolescent pregnancy was looked at. A total of 478 respondents were interviewed. Majority of the respondents were married and had some formal education. Most of the respondents were Kikuyus by tribe because the division borders Central Province.

Most of the respondents were housewives who were living in either one or two roomed houses. This is an indication of low socio-economic group. For those who were single most of them were living with their parents and still dependant after delivery of the first child.

Sixty-seven point eight of the respondents were between 20-29 years which means they were young parents and likely to have modern beliefs. They are also young because Dagoretti is a peri-urban area of Nairobi where most young people rent houses in search of jobs either in the city of Nairobi or in the ten slaughterhouses situated there.

4.2 Reproductive health Knowledge

Knowledge of reproductive health was highest in sexually transmitted diseases, and lowest in fertility knowledge. The study indicated that almost all the respondents had heard of family planning, but not all had knowledge on the methods. This compares favourably with a study NCPD, (1998) where 96.8% of all the women had heard of at least a method of family planning and John Hopkins Centre for Communication Programs where 96.2% of women were aware of family planning (NCPD et al., 1998; JHU/CCP, 1997).
Most respondents mention pills, condoms and injection methods of family planning. Similar results were obtained by NCPD (1998). The methods least known by respondents were withdrawal methods, vasectomy and diaphragm. Majority of the respondents mentioned those methods that are highly used by young couples while a smaller group mentioned the rarely used ones. Respondents were highly knowledgeable on pills, injections and condoms and least knowledgeable on vasectomy tubal ligation and Norplant. Similar results were found by JHU/CCP (1997) where females cited pills as the most known and Norplant and diaphragm as the least recognised. This indicates that the more popular the method the more it is likely to be known. It could also be due to the fact that Norplant was introduced recently to the family planning programme in Kenya, while tubal-ligation and vasectomy are permanent methods which are unlikely to be used by the young couples who are still in the child bearing age as is the case of this population. Forty percent of the respondents did not have enough knowledge on family planning and the little they had, got it from either seminars or Maternal Child Health Clinics. This contrasts with what was found by the NCPD (1998) and JHU/CCP (1997) where knowledge was high (NCPD, 1998; JHU/CCP, 1997). Assessing knowledge by the mention of contraceptive is not enough. In this study knowledge was assessed by explaining how the method is used. Women need enough knowledge for them to use the contraceptives effectively.

When cross tabulation was done and chi-square determined knowledge of family planning was significant positively associated with age also educational level of the respondent. Multivariate analysis showed that those people who had college education or more were 12 times more likely to have knowledge of family planning as compared to those with primary education (O.R.11.6, p = 0.000). Those who had four or more children were 2 times likely to have knowledge of family planning (O.R.1.8, p = 0.04). This can be accounted for by the
fact that more educated mothers are likely to seek information on family planning or read about it as compared to those with less education. Also mothers with 4 children or more will have gone to the healthy facility for maternal childcare more times where they get information as compared to those with only one child.

Knowledge of fertility was only present in slightly more than half of the respondents. Considering menstrual cycle, knowledge was quite low with only 13.4% of the respondents knowing that a mother have the greatest chance of conceiving at the middle of the cycle, and only slightly more than half of these knew why it occurs at this time. This was low as compared to NCPD (1998) 22.8% and (1993) 20% and Youri, (1994) 28.5%. This could be accounted for by the fact that Youri did his research in secondary schools where the whole group had secondary level of education. Forty three point three percent knew that a woman can get pregnancy if she used withdrawal method, according to Erulkar 1998 only 34% of women knew this (Erulkar, 1998). Most respondents knew that a girl could get pregnant if she cleaned herself after sex. Thirty five percent knew that one can get pregnant before she starts menstruation, Youri found that 76 % of the schoolgirls knew this. Mothers do not seem to have more knowledge than adolescents.

When cross tabulation was done and chi-square determined knowledge of fertility was statistically positively associated with educational level. In multivariate analysis no variable was retained.

Almost all the respondents (99.4%) had heard of STI / HIV/AIDS and majority had knowledge. This compares favourably with the results of JHU/CCP (1997) where 100% had awareness, NCPD (1998 and 1993) where awareness was 98% and 99% respectively. 95.8% knew that STI are preventable compared to NCPD, 1998 where 91% knew (JHU/CCP, 1997; NCPD, 1993; NCPD, 1998). Almost all the respondents knew that condom is a form of
family planning method that can prevent STI, but only 20.3% thought that condoms are effective in prevention of STI. Ninety one percent had knowledge about condoms but only 19.2% approved its use in prevention of STI. There seems to be a big gap between knowledge about condom and the actual usage. This could be attributed to the recent debate in the country where religions people and even medical personnel have queried the effectiveness of condoms in prevention of STI.

Other ways of preventing STI mentioned in the study included both husband and wife sticking to one sexual partner. In the focus group discussion men were blamed for being promiscuous and the women felt that they are at the mercy of their husbands in prevention of STI especially AIDS. A small percentage thought STI was not preventable because men cannot be controlled by their wives or partners in extramarital sex. Similar findings were found in India where 400 women attending STI clinic all tested positive for at least one STI and 13.6% had HIV although 91% of them reported that they have never had sex with anybody else apart from their husbands (Quinacrine, 1994).

Majority of the respondents knew the dangers of the STI, in relation to treatment and in regards to future conception. Most respondents mentioned it was embarrassing to treat and may lead to infertility. This is an indication that the community still stigmatises those with STI. Community should be educated to remove the stigma so as to reduce the spread of AIDS. This could also change the attitudes of those infected with STI not to spread it, if they are accepted by the society.

Knowledge related to the mode of existence of the non-symptomatic infectious state and preventive of STI was high. Majority knew it is not possible to identify someone suffering from AIDS and also that he could also look healthy, while a notable number knew STI are preventable.
When cross tabulation was done and chi-square determined knowledge of STI was significant positively associated with age also educational level. Multivariate analysis showed that those with college education or more were 6.7 more times likely to have knowledge of STI as compared to those with primary education. Respondents with more education were likely to be more economically stable as compared to those with less and since they have the know-how and resources, they are likely to seek information or get it from mass media as compared to semiliterate.

4.3 Practice Attitudes and Beliefs Of Family Planning

Majority of the respondents had used a contraceptive at any one time but only few were using contraceptives at the time of study. The decrease of contraceptive use could be accounted by the fact that those mothers who start using the contraceptives at one time do not always continue using them. They may discontinue due to side effects or if they are not sexually active. For those who were not using three quarters of them were planning to use in future. In this study contraceptive use at any one time, practice at time of study and plan to use in future was high as compared to NCPD and JHU/CCP (NCPD, 1998; JHU/CCP, 1997). This could be accounted for, by the fact that this study was carried out in a peri-urban area of Nairobi where information is likely to be high and facilities of family planning readily available as compared to the other two studies, which were done mostly in the rural area. Peri-urban women are more likely to use the contraceptives as compared to their rural counterparts due to availability and knowledge. Most respondents knew where to get a contraceptive. Health facilities were quoted by the highest percentage as the main source of family planning and majority of the respondents got their first contraceptive from there. However, despite the fact that health facilities were mentioned as the main source of family planning methods, at the
time of study not all those who were using family planning methods had attended family planning clinics one year before the study, suggesting that other sources of contraceptives are used. Most young respondents who were between 20 –30 years had used contraceptive after delivery of the first or the second child while the other older respondents had used them after delivery of the third child. This compares favourably with NCPD (1993) where 21% of the women between 20-25 were using contraceptive after the first child as compared to 5% of those between 45-49 years (NCPD, 1993). This is an indication that young couples use contraceptives to space children while the older ones use them to limit the number of children. According to the study only 25% of the respondents had used contraceptives at age 19 and below. A lower percentage of 12.1% had used contraceptives before birth of the first child. Half of the respondents had used contraceptive after the first birth an indication that contraceptive are likely to be used to space children rather than delay the first birth due to fear of side effects and availability.

Low contraceptive use during adolescent is due to the fact that adolescents lack basic reproductive health information. They are concerned about their privacy or the ability to pay and real or perceived disapproval by the service providers (PATH/UNFPA, 1998). A low percentage of contraceptive use is seen before first birth, an indication that adolescents are unlikely to go for services in the health facility due to fear of disapproval by the service providers. Contraceptive are not popular among adolescents and women without children similar results were found by NCPD (1998) where only 9.9% of the Kenyan adolescents aged 15-19 years were using modern contraceptives and among the married adolescents only 23.5% were using and CAFS where abstinence was the most popular method of contraceptives for adolescents (NCPD, 1998; CAFS, 1994). This could be attributed to either lack of knowledge or fear of side effects.
When cross tabulation was done and chi-square determined practice of family planning was significant positively associated with age also marital status. Multivariate analysis showed that respondents who were 40 years and over were 90 times less likely to practice family planning as compared to those who had one child \( (O.R. = 0.12, \ p = 0.002) \). This could be an indication that some of these older respondents were either not sexually active or had reached menopause while others were shy to give facts or they were using traditional methods.

Nearly all the respondents approved that family planning was necessary. This percentage is high considering that only 77.4% of the respondents’ religious affiliation approved family planning. For those who were married 90.7% of the husbands were perceived to approve family planning. According to NCPD (1998) 89% of the women approved family planning and 65% of the husbands approved it (NCPD, 1998). This is low as compared to this study and can be explained by the fact that women who were using family planning tended to assume that their husbands approved as long as they did not object. If this is true an ignorant man is said to approve despite the fact that the wife may not know his stand. The information on approval is important because it helps in the formulation of family planning policies, since it indicates the extent to which further education and publicity are needed to gain or increase acceptance of family planning. It also indicates the hindrance to success.

When respondents were asked about their beliefs on different methods, vasectomy was the least recommend 18.6%. The reasons for not recommending it were given as that “it renders men useless sexually” and again the fact that men are permanently rendered sterile yet there may be need for more children. This indicates inappropriate knowledge considering that tubal ligation was recommended by 44% of the women despite the fact that it is also a permanent method an indication of the old belief that family planning is for women. Condoms were recommended by half of the respondents citing that it prevents STI while the other half
thought that it was unreliable and it should be used by those who are promiscuous. Despite the fact that most people were aware of condoms and had knowledge about it, it is unlikely to be used due to fear of non-effectiveness. A lot of understanding of what is condom and how it works is required in order to remove some myth as one respondent put it in focus group that condoms contains “HIV virus”. Few respondents approved use of IUCD as most of them had a lot of false myth about it especially in the FGDs where participant said that “it moves round the body and if one conceives with it the baby is born holding it”. Hormonal contraceptives were approved by the highest number of respondents citing that they are easy to use, to get and cheap, however a small percentage still belief that it causes cancer and infertility and reduces libido.

Most respondents are unlikely to use or approve use of family planning despite the knowledge due to the false myth around most contraceptives. Knowledge is required to improve the knowledge and remove the myth on family planning methods.

4.4. Adolescence Pregnancy

Forty four point four percent of the respondents reported being a mother or a guardian of an adolescent girl who had become pregnant while under her care. This compares favourably with demographic and health surveys where 45% of adolescents were mother by age 19 (NCPD at al 1998). Most respondents were aware of adolescent pregnancy but only two-thirds knew the correct definition of adolescent pregnancy. Adolescent pregnancy was mainly attributed to lack of guidance and counselling from the parents, followed by exposure to immorality from the media, and lack of correct knowledge of reproductive health.

In the FGDs adolescent pregnancy was linked to poverty, lack of guidance and counselling, drug abuse and breakdown of cultural practices. This compares with IPPF (1994) where
economic conditions and peer pressure were blamed for adolescent pregnancy. Ferguson (1988) had similar results from senior teachers who blamed lack of parental control, poverty and ignorance on RHK as the main cause. Similar results were found by UNFPA, NCPD, and Nedelson (UNFPA, 1996; NCPD, 1998; Nedelson et al., 1980). The respondents felt that provision of knowledge of reproductive health to adolescents and eradication of poverty will reduce adolescent pregnancy. Majority of the respondents could name at least one problem associated with adolescent pregnancy either medically or socially. Most respondents had knowledge that adolescent pregnancy causes morbidity ad mortality as compared to older women. The respondents are aware of problems associated with adolescence pregnancy but do not seem to have a solution for reduction of this and thus assistance is required.

Knowledge of adolescence pregnancy is a good baseline when trying to prevent adolescent pregnancy since mothers already have the basic knowledge. Most respondents would unconditionally accept their adolescent daughters in case of pregnancy and were willing to counsel them. They were also ready to take their daughters back to school if willing and interested while taking care of the grandchild when the daughter goes back to school in hope of a better future. Ajayi found similar results in (1997) where majority of primary school teachers felt that a girl should resume school after delivery. The results were further supported by Furstenberg (1990) who found that when adolescents are provided with education after pregnancy, chances of living a better life later are increased (Furstenberg, 1990). It is clear from the results that respondents would be willing to prevent adolescence pregnancy first time given the means and ways.

66.9% of the respondents felt that adolescents should not have access to FP methods because it would contribute to immorality and cause infertility. Only 32% of the respondents felt that it would be a good way to prevent STI and pregnancy. According to Erulkar over 60% of the
parents felt that sexually active young people should have access to family planning. This contrasts with what was found in this study and could be attributed to the fact that this study involved only mothers of whom majority had experience on contraceptives. Asked the right time to use contraceptives majority said after marriage and only a few felt they should use them before marriage when they become sexually active. This is an indication that the respondents had the old belief that the contraceptive should only be used after marriage or delivery.

Mothers were further asked whether they would like their own daughters to use contraceptives majority answered negatively while few thought it was necessary to prevent pregnancy. Contraceptives were discouraged to prevent infertility and immorality, the same reasons were given in prohibiting adolescents not related to respondents from access to contraceptives. Despite the high negative attitude towards adolescents' use of contraceptives, majority of the respondents knew that adolescents use contraceptives to prevent pregnancy since they are sexually active.

Of all the respondents who reported adolescent pregnancy most of them thought that adolescents did not get pregnant at the right age and only a very small percentage thought it was the right time. This indicates that adolescent pregnancy is not accepted in the society. Almost half of the adolescent who got pregnant had delivered at a tender age of 14 and below while the other half delivered between age 15 and 19 years an indication that adolescent pregnancy is a problem in this area. The age at delivery is low exposing the adolescents to all types of complications associated with adolescent pregnancy and delivery. The respondents supported this is a problem with majority of them mentioning poor socio-economic situations, dropping out of school, and illegitimate children as the outcome. Erulkar found similar results where majority of the parents/guardian considered teenage pregnancy a big problem. This was
also supported by NCPD (1993) and (1998) where adolescent girls aged 15-19 years who had completed primary school dropped by 16% in ten years among female (NCPD, 1993 and 1998).

When Chi-square was applied presence of adolescent pregnancy was statistically associated with the following factors: education level, Religion, occupation and number of children. However, when multivariate analysis was done only education, religion and number of children were statistically significant. Those respondents who were less educated, were not Christians and had more children were more likely to report adolescent pregnancy.

Ninety nine point eight percent of the mothers thought reproductive health should be taught to adolescents in school, this is high as compared to NCPD (1998 and 1993) 79% and 73% respectively (NCPD 1998 and 1993). Out of those who thought that adolescent girls should be taught reproductive health 87.1% felt that it should be done in primary school. This compares with Mensch who did a research on primary school teachers and guardians, 91% of the teachers approved teaching of RHK and 74% of the guardian approved teaching RHK in school (Mensch et al 1998).

JHU/CCP (1997) found similar results where 80% of the female respondents approved RHK in schools, of which 94% mentioned that it should be taught in secondary (JHU/CCP 1997).

In FGDs the respondents felt that RHK should be taught early in primary since children become sexually active very early. The current opposition towards teaching reproductive health in Kenya appears to represent the views of the vocal minority and does not speak for the majority of population. This compares with a qualitative research among Kenya’s policy makers who supported Reproductive Health Knowledge being taught in school (KYIP, 1995). The timing of when to teach seems to differ in different studies. Considering that children in the peri-urban area seem to mature early and are likely to know more than their counterparts
in rural area as a result of exposure to immorality, the respondents feel that the RHK should be started early in urban areas as compared to rural area. Ideally sex education, should be a gradual process, with appropriate information being given at different ages. Majority of the respondents recommended special clinics for adolescents where 69.5% of them felt they should be taught reproduction health and 18.4% family planning. Similar results were found by PATH/UNFPA 1998 where they found that adolescents are concerned about privacy, perceived disapproval by service providers who limit access to services where they exist. About 78% of the respondents thought adolescents should not have boyfriends since this will lead to misbehaving and immorality. This does not tally with what Njau found out used to happen traditionally. According to Njau (1994) sex education was important and realistic. Adolescents were supposed to learn how to control sexual desires when under pressure to express them rather than keep away from boys and girls or situation that may arouse them (Njau, 1994). This is exactly what we are lacking today in our youth “self control.”

Majority of the parents did not recommend abortion due to risks involved. The very few who recommend abortion mentioned girls could be too young and in school. This compares with JHU/CCP (1997) where less than half the females could tolerate abortion under any condition (JHU/CCP 1997). This is an indication that abortion is still not recommended in the society. Most mothers felt that Female Genital Mutilation (FGM) does not play any part in prevention of adolescent pregnancy while the few who felt it does mentioned it decreases libido and the participants go through counselling during the process. Majority of the respondents do not support Female Genital Mutilation (FGM) as preventive measure of adolescent pregnancy and this can be a step in eradicating it. Few mothers 14.8% thought the best time to give birth is below 20 years if married and 4.6% if not married. This indicates that marriage is a licence to give birth without considering the risks of adolescent pregnancy and delivery. According to
Kikuyu customs, marriage is regarded highly and getting children after this is normal no matter how young the girl is. Failure to give birth after marriage is associated with infertility on the side of women. This tallies with what IPPF (1994) found that in many parts of the world girls get married when they are young and started having children before 20 years. Today 18% of the girls in Asia and 16% in Africa and 8% in Latin America are married by age 15 causing concern because they are not ready for childbearing both emotionally and physically (IPPF 1994). In the African culture giving birth when single was associated with immorality and social problems, and thus the reason of the low percentage of respondents supporting birth when single. However IPPF 1994 found that social changes have worked to loosen family ties and erode traditional customs that discouraged pre-marital sex (IPPF 1994). Migration to cities disrupts families and changes lifestyle, the mass media influence peoples attitude by portraying sexual images of irresponsible and free sexual relations. There is need to educate the society on dangers of adolescent pregnancy whether married or single.

4.5 Counselling of Adolescents

In this study 60% of the respondents had counselled adolescent girls not related to them with only 30.8% counselling their own daughters on reproduction health. There is a big difference between counselling of adolescents not related to respondents and own daughter. Failure to counsel every adolescents not related to them was attributed to lack of respect from adolescents while that of the daughter was due to feeling uncomfortable and over caring, however in both lack of knowledge was mentioned by a few respondents. Of all the responders only 35.1% felt confident that they had enough knowledge to guide and counsel adolescents. More than half of those who did not counsel any adolescent at all felt uncomfortable to do so. This compares favourably with Erulkar where between 17% and 33%
of the parents felt less than completely knowledgeable enough to discuss reproduction health issues with adolescents, and greater percentage 22% - 40% felt too embarrassed to discuss issues. Nadelson also found shyness as the main problem.

Counselling is only done to few adolescent girls. Some get pregnant even before they receive any guidance. In this study only 41% of the adolescents had been counselled before conceiving meaning that 59% had no knowledge on how they could have prevented pregnancy. Similar results were found by CAFS 1994 where 35% of the adolescent girls had not received any information on sexuality or motherhood. This indicates that many children reach adolescence with wrong or little information on sexuality. Lack of knowledge being one of the causes of adolescent pregnancy there is need to review the present policy on RHK being taught in school. Half of the respondents blamed parents for not counselling their daughters while 40.6% blamed teenagers for disobedience leading to adolescent pregnancy. The same reasons were given on a workshop in Advocacy for Rational Approaches to Adolescent Reproduction Health at Naivasha, where youth blamed parents, "most parents do not teach or even mention anything to children about sex." According to them, the biggest problem youth encounter is lack of sex education. They lack knowledge on how to go about with relationships, such as what to do or not to do when faced with sexual encounter and the right ages to get married or get children. According to IPPF (1994) adolescents get their RH information from the media and their friends, this may be inaccurate or misleading and even encourage risky behaviour (IPPF 1994). Njau in 1993 found the same thing in Kiambu, where parents and teenagers thought it not proper to discuss sexual matters between them, as they felt shy and embarrassed to communicate. This also compares with Youri 1994 where only 31% of secondary school girls' mothers counselled their daughters. For the few who counselled adolescent girls the topics discussed were STI/HIV/AIDS, family planning and
how to avoid pregnancy. The parts found difficult to handle by mothers were knowledge of fertility, family planning and RHK in general. This corresponds with the areas where respondents were found to have low knowledge. The information required by the respondents to be able to guide and counsel adolescents were, guidance and counselling skills, reproductive health in general, STI/HIV/AIDS prevention and FP use. The most effective person to guide girls on prevention of adolescent pregnancy was given as parent first then medical people. This compares favourably with Erulkar 1998 where 80% of the parents felt that young people should get Reproductive health knowledge from parents / guardian. However JHU/CCP (1997) found that adolescent felt most uncomfortable talking about sexual matters with parents and most comfortable talking to health providers. Majority of the respondents thought that mothers were best placed to counsel and guide their daughters on Reproductive health. The same results were displayed by JHU/CCP 1997 where parents seemed to split roles along gender lines in respect to Reproductive health. Youri’s study of schoolgirls supported these findings where mothers were said to provide most guidance on sexual related issues as compared to anybody else. According to the respondents 86% said fathers do not play any role in counselling while 14% thought they do. Youri (1994) and JHU/CCP (1997) found similar results where very few fathers compared to mothers were counselling their daughters on reproductive health. The reasons given why fathers should not counsel their daughters is that it is against the culture, are embarrassed and lack of time. Considering that 70% of the respondents had reproductive health knowledge and counselling is still very low then this suggests that other factors such as education and counselling skills are required among the respondents to offer guidance and counselling.

When multivariate analysis was done counselling of unrelated adolescents was associated with occupation and number of children such that those who were professionals / employed
and those who had one child were more likely to counsel. These two groups are likely to receive respect from the adolescents as compared to others because they are more educated. Counselling of own daughter was positively statistically associated with age, number of children and educational level. An older respondent with few children and more education is likely to counsel own daughter. This could be explained by the fact these people are likely to have more knowledge and experience considering their education and exposure and are more confident when dealing with their children.
CHAPTER FIVE

Conclusions And Recommendations

5.1 Conclusions

From the results the following conclusions are made.

1. Majority of the respondents had knowledge of reproductive health. When knowledge on specific topics was considered, only sexually transmitted infections was high compared to that of family planning and fertility.

2. Majority of the respondents counselled adolescents who were not related to them as opposed to their own. Failure to counsel their own daughters was attributed to feeling embarrassed and uncomfortable. Respondents with fewer children, older in age and more educated were more likely to counsel adolescents. However mere knowledge on reproductive health did not lead to counselling.

3. Presence of adolescent pregnancy in a home was associated with the number of children, religion and educational level of the respondents. Those who had few children were Christians and more educated were less likely to report adolescent pregnancy. However, presence of adolescent pregnancy was not associated with reproductive health knowledge.

4. Respondents had enough knowledge of reproductive health but they lacked confidence and counselling skills, which are required for effective counselling. Most of them felt they would benefit from intensive reproductive health knowledge and counselling skills in order to gain confidence.
5. Majority of the respondents recommended counselling on reproductive health in school preferring it be started in upper primary. They do not believe knowledge encourages promiscuity, however they disapproved use of contraceptives by adolescents citing it would lead to infertility and immorality.

6. The respondents felt that parents first and then teachers were the best persons to guide and counsel adolescents, in particular mothers to guide daughters, which indicates split of parental roles along gender lines.

7. Only 40% of the adolescents who had been counselled got pregnant, as opposed to 60%. An indication that counselling could be one of the factors that plays a part in reduction of adolescent pregnancy.
5.2 Recommendations

1. Mothers need to be empowered with knowledge and skills of counselling so as to overcome the shyness, discomfort and gain confidence in counselling their own daughters on reproductive health besides being assisted by those with technical know how.

2. There is need for parental institutional education to develop the necessary skills and attitudes in which to assist the adolescent girl in dealing with their sexual and reproductive health problems. Parents need to receive training on how to support the adolescents to avoid risky behaviour, which may expose them to STI and pregnancy. Parents’ role should be strengthened with recognition in the provision of this education.

3. Activities that will enhance the parent and peer participation in reproductive health education need to be developed in response to the mother’s desire for educating their own adolescents.
4. Despite the fact that adolescents are the primary targets in reproductive health knowledge, other actors such as parents and health workers should be seen as equally important in supporting adolescents. They should be equipped with appropriate skills in order to assist the adolescent with the necessary reproductive health knowledge without parental and religious resistance. Better understanding and practice of reproductive health practices by adult actors will facilitate their use by adolescent.

5. Girl children need to be counselled and educated up to at least secondary level which may decrease adolescent pregnancy among them and their children in future because education delays child bearing and increases counselling.

6. More researches are recommended to find out how much adolescents would appreciate counselling from members of the society, religious leader, community health workers and teachers.
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Appendices
Appendix I: Informed Consent

Adolescent pregnancy is on the increase in our society. Most mothers lack knowledge and the skills to guide and counsel their adolescent girls on reproductive health issues.

This questionnaire is aimed at determining awareness of mothers on reproductive health issues that may be of benefit in guiding adolescent daughters/girls on matters related to reproductive health. The information given by respondents will be treated confidentially and will be used for study purposes only. No name will be indicated on the questionnaire.

The risks and possible benefit of participating in the study have been explained to me and I have accepted to be interviewed.

_________________________________________  ________________________________
Interviewee  Date

_________________________________________  ________________________________
Investigator  Date
Appendix II: Structured Questionnaire

Serial No. ________
Location No. ________
Cluster No. ________

Part 1: Socio-economic and Demographic Characteristics

1. What is your age? ____________

2. What is your religious affiliation?
   () Catholic    () Muslim    () Protestant
   () Others (specify) ____________

3. Level of education completed
   () 1-4    () 5-8    () Secondary    () College and tertiary level education

4. Occupation
   () Housewife    () Self employed    () Profession    () Employed
   () Others (specify) ____________

5. Marital Status
   () Single    () Married    () Separated    () Divorced    () Widowed
   () Others (specify) ____________

5b. If single go to 7

6. Husband's occupation
   () professional    () Petty trader    () Businessman    () Others (specify) _____

7. Whom do you live with? (for single mothers only)
   () Parents    () Relatives    () Friends    () Alone    () Others (specify) ______

8. How big is the house you live in?
   () One room    () Two rooms    () Self contained    () Others (specify) ______

9. How many children do you have?
   () 1    () 2    () 3    () 4    () ≥5
   Sons _________ Daughters _________

10. How old is your eldest daughter? (Incase she has one from Q9) ______

11. How many daughters do you live with over 10 years? ______

12. Which ethnic group do you belong to __________________________
Part 2: Knowledge of Reproductive Health

A. Family Planning Knowledge

1. (a) Have you ever heard of family planning? ( ) Yes ( ) No

(b) Which methods of family planning have you heard of? Explain.

(Use the table below to tick as the respondent mention and explains the methods)

Table On Knowledge On Family Planning Methods

<table>
<thead>
<tr>
<th>Methods Used In Family Planning</th>
<th>Heard Of Method*</th>
<th>Can Explain Method**</th>
<th>Unable To Explain Method***</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pills</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taken everyday</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IUD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loop or coil placed inside a woman by a doctor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Injections</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Injection given by a doctor or a nurse which prevents pregnancy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diaphragm, Foam, Jelly</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Used by woman before intercourse to prevent pregnancy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Condoms</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A rubber sheath used by men on their male organ to prevent pregnancy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female Sterilization</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>An operation carried out on a woman to avoid having more children</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Norplant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Several small rods placed in a woman’s upper arm by a doctor / nurse which can prevent pregnancy for several years</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male sterilization</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>An operation done on men to avoid having more children</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural methods</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avoiding having sexual intercourse on certain days</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Withdrawal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men pulling out before the fluid comes out</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Respondent can mention the method spontaneously or following probing.
**Can explain how the method is used.
***Unable to explain the method.
B. Knowledge On Fertility

1. (a). When, during the menstrual cycle does the woman have the greatest chance of becoming pregnant? ( ) During her period ( ) Right after her periods have ended ( ) In the middle of her cycle ( ) Just before her periods begin
   (b). Explain your answer. ____________________________________________

2. If a man uses withdrawal method he can still make the girl pregnant ( ) Yes ( ) No

3. A woman can get pregnant if she cleans herself after sex

4. One can get pregnant first time they have sexual intercourse

5. When the periods are irregular, a woman cannot get pregnant

6. (a). A girl can get pregnant even before she starts menstruation
   (b). Explain your answer. ____________________________________________

B. Knowledge on Sexually Transmitted Infections

1. Have you ever heard of the infections that can be transmitted through sex? ( ) Yes ( ) No
    
    If Yes go to No 2  
    If No go to No 3

2. Name the STI infections which you know
   ( ) HIV/AIDS   ( ) Syphilis   ( ) Gonorrhoea   ( ) Genital warts
   ( ) Others (specify) ____________________________________________

3. Can you identify someone with sexually transmitted infections? ( ) Yes ( ) No

4. Can a healthy looking person have AIDS? ( ) Yes ( ) No

5. What are the dangers of STIs?
   (a). On treatment:
   ( ) Expensive to treat   ( ) Difficulty to treat
   ( ) Embarrassing to treat ( ) Others (specify) ________________
   (b). On procreation:
   ( ) Infertility   ( ) Spread during sex ( ) Others specify ________________

6. Do you know any type of family planning that can prevent STI? ________________
    If Yes which one? ________________
7. Do you think STI is preventable?  
( ) Yes  ( ) No  
If Yes go to No 8  
If No, Why? ____________________________

8. How can you prevent STI?  
( ) Use of condoms  
( ) Talking to husband to stick to one partner  
( ) Stick to one partner  
( ) Others Specify ____________________________


1. Are you currently using any contraceptives?  ( ) Yes  ( ) No  
If yes, which one ____________________________  
If no, why ____________________________

2. Which family planning methods have you used before?  
__________________________

3. Do you plan to use contraceptives in future?  ( ) Yes  ( ) No  
If Yes which one? ____________________________  
If No, why? ____________________________

4. Where would you get a contraceptive?  
( ) Shops  ( ) Chemists  ( ) H/Centres  
( ) Community based worker  
( ) Others (specify) ____________________________

5. Is it hard to obtain a contraceptive?  ( ) Yes  ( ) No  
If Yes, why? ____________________________

6. When did you use the first method of contraceptive?  
Age ____________________________

7. Where did you get your first contraceptive from?  
( ) Friends  ( ) Health facility  
( ) Shops  ( ) Husband  
__________________________

8. How many children did you have at that time? ____________________________

9. Have you been to a family planning clinic during the last one-year?  
( ) Yes  ( ) No  
If no would you have wanted to? ____________________________  
If yes why have not you gone? ____________________________

10. Do you think you have enough knowledge on family planning?  ( ) Yes  ( ) No  
Explain your answer ____________________________

11. What else would you like to know about family planning?  
__________________________
12. Do you approve the use of family planning services in general?
   ( ) Strongly approve ( ) Approve ( ) Disapprove ( ) Strongly disapprove ( ) Not sure

13. Does your husband approve the use of family planning? ( ) Yes ( ) No

14. Does your religion prohibit use of family planning methods? ( ) Yes ( ) No

15. Do you think family planning is necessary? ( ) Yes ( ) No

16. Would you recommend
   (a) Use of a condom by your partner
      Support your answer ( ) Yes ( ) No
   (b) Vasectomy on your partner after child bearing
      Support your answer ( ) Yes ( ) No

17. Would you recommend tubal ligation after child bearing. ( ) Yes ( ) No
    Support your answer

18. Do you think IUCD is an ideal contraceptive to use? ( ) Yes ( ) No
    Support your answer
    Would you advocate for hormonal contraceptives
e.g. pills, injectables etc. ( ) Yes ( ) No
    Support your answer

Part 4: Adolescent Pregnancy

1. (a) Have you ever heard of adolescent pregnancy? ( ) Yes ( ) No
   (b) What is adolescent pregnancy?
      ( ) Pregnancy before marriage
      ( ) Pregnancy in school
      ( ) Pregnancy before 20 years
      ( ) Unplanned pregnancy

2. In your own opinion what are the causes of adolescent pregnancy?
   ( ) Lack of correct knowledge of reproductive health
   ( ) Peer pressure
   ( ) Lack of Parental guidance & counselling
   ( ) Exposure to immorality through media
   ( ) Others specify ______________________

3. Do you think it is a problem in our society? ( ) Yes ( ) No
   If Yes, why? ______________________

4. What do you think can prevent this problem of adolescent pregnancy?
   ______________________

5. What is the best age in years to give birth in your own opinion?
   (a) Married___________ (b) Single___________
6. According to your opinion who should be blamed for teenage pregnancy
( ) community  ( ) Adolescent ( ) Government ( ) Parents ( ) Others__________
Why ____________________________________________________________

7. Name the problems that can result from adolescent pregnancy
(a) Medical
( ) obstructed delivery  ( ) Delayed labor
( ) Excessive bleeding ( ) High blood pressure
( ) Others (specify)______________________________________________

(b) Socially
( ) Rejection by the community ( ) Rejection by the parents
( ) Lack of education ( ) Socio-economic
( ) Others (specify)______________________________________________

8. If your daughter became pregnant outside marriage what would you do?
_______________________________________________________________

9. In your opinion should those adolescents who have delivered be allowed to
go back to school ( ) Yes ( ) No
Explain _______________________________________________________

10. Would you take care of your daughter's child to allow her to go back to school?
( ) Yes ( ) No

11. In your own opinion should Adolescents have access to any family planning services
( ) Yes ( ) No
Explain your answer ____________________________________________

12. When is the right time to use contraceptives?
( ) after they finish school ( ) After marriage
( ) When they start practicing sex ( ) After delivery
( ) I don’t know

13. Would you like your daughter to use contraceptives ( ) Yes ( ) No
Why? _________________________________________________________

14. Do you think adolescents use contraceptives? __________
Explain your answer ____________________________________________

15. Do you think Reproductive Health Information should be taught in
Schools to adolescents ( ) Yes ( ) No
If Yes, at what level? ( ) Lower primary ( ) Upper primary ( ) Secondary
( ) Others specify__________________________________________
If No, Why? _________________________________________________

16. The best time to teach reproductive health to adolescents not in school is?
( ) Before they start practising sex ( ) After marriage
( ) When they start practising sex ( ) When they are mature to get pregnant
( ) Others __________________________
17. In your opinion do you think an adolescent who has access to contraceptives and reproductive health knowledge is likely to get pregnant as compared to others?
( ) Yes  ( ) No
Support your answer _____________________________

18. Do you think Adolescents should have special clinics ______ If Yes for what?
( ) Family planning ( ) Parenting ( ) Reproductive health ( ) Others
If No why _____________________________

19. Adolescents should have boyfriends
( ) Yes  ( ) No
Explain _____________________________

20. Do you think adolescent pregnancy and child birth cause more morbidity and mortality than in older women
( ) Yes  ( ) No

21. Would you recommend induced abortion to adolescents ( ) yes ( ) No
Explain _____________________________

22. Do you think female genital mutilation plays any part in prevention of adolescent pregnancy?
( ) Yes  ( ) No

Part 5 : Counselling

1. Have you ever had any discussion / Counseling session related to reproductive health with
   (a) your daughter (ask only those who have daughter between 10 and 20 years).
   ( ) Yes  ( ) No
   (b) Adolescent girl (ask all the respondents)
   ( ) Yes  ( ) No
If (a) and (b) is No go to 3, If (a) or (b) is yes, go to 2

2. Name the main topics you counselled her on?
   ( ) Family planning and how to avoid pregnancy ( ) STI/HIV/AIDS
   ( ) Sexual intercourse and relationships ( ) Safe and unsafe days
   ( ) Others (specify) _____________________________

3. Why don't you discuss reproductive health?
   ( ) Lack of knowledge of reproductive health  ( ) I feel uncomfortable
   ( ) I don't know how to start  ( ) Others _____________________________

4. Name the topic you find difficult handling when discussing reproductive health?
   ( ) STI  ( ) Knowledge of fertility  ( ) Family planning
   ( ) Others _____________________________

5. Do you think you have enough knowledge and skills to guide and counsel your daughter or adolescent girl on reproductive health practices?
( ) Yes  ( ) No
6. What information would you require in order to be able to counsel adolescents of prevention of pregnancy?
( ) Reproductive Health Knowledge in general ( ) Guidance and Counselling skills
( ) Family planning methods and how they are used ( ) STI/HIV/AIDS prevention
( ) Others specify ____________________________

7. Whom do you think would counsel and guide the girls effectively in order to prevent adolescence pregnancies
( ) Teachers ( ) Parents ( ) Preachers
( ) Medical personnel ( ) Peers ( ) Others (specify) ______________

8. Are you a mother / a guardian of an adolescent who became pregnant while under your care?
( ) Yes ( ) No
If Yes at what age did she get pregnant? ______________

9. In your view do you think she got pregnant at the right time?_______
Explain ____________________________________________

10. Had you counselled and guided her on reproductive health before she conceived?
( ) Yes ( ) No

11. Which parent (father or mother) is affected most by the daughter’s pregnancy?
__________________________________________
In which ways? __________________________________

12. Mothers have been credited in counselling their daughters. Do you think mothers are the best placed to guide their daughters in relation to adolescent pregnancy? ( ) Yes
( ) No
If Yes Why? _______________________________________
If No give reasons __________________________________

13. In your own opinion do fathers play any part in guiding and counselling their Daughter on prevention of adolescent pregnancy?
( ) Yes ( ) No
If yes which role do they play? ____________________________
If why No ___________________________________________
Appendix III: Focus Group Discussion Guidelines

1. (a). Do you think adolescent pregnancy is a problem in Dagoretti Division?
   ________________________________

   (b). How can it be prevented?
   ________________________________

2. (a). Do adolescents girls have discussion related to reproductive health with their mothers?
   ________________________________

   (b). Which topics do they discuss?
   ________________________________

   (c). Are those discussions important?
   ________________________________

3. (a). Do you think access to contraceptives would be of any help to adolescents and why?
   ________________________________

   (b). Which contraceptives and when should they be used by adolescents?
   ________________________________

4. (a). What age do you consider best to teach adolescents reproductive health?
   ________________________________

   (b). Why that particular age?
   ________________________________

5. In your opinion who is the best person to advise adolescents on reproductive health?
   ________________________________

6. Do you think it is right for adolescents to have sex before marriage?
   ________________________________

7. What are the risks of sexual activity in adolescents girls?
   ________________________________

   ( ) Medical problems
   ________________________________

   ( ) Social problems
   ________________________________

   ( ) Others
   ________________________________

8. What are the dangers of delivering during adolescent years?
   ________________________________

   ( ) Medical problems
   ________________________________

   ( ) Social problems
   ________________________________

   ( ) Others
   ________________________________
9. Where do adolescents get their reproductive health knowledge from?

10. In your own opinion
   (a) What is the ideal age for marriage?

   (b) How many boyfriends should an adolescent have?

11. Should a girl be allowed to continue with school after delivery?

12. (a) Do you think mothers have a part to play in prevention of adolescent pregnancy?

   (b) 

13. (a) Do fathers play a role in prevention of adolescent pregnancy?

   (b) Is there a need to do so?

14. What are the women’s beliefs about the following?
   (a) Pills
   (b) IUD
   (c) Injections
   (d) Diaphragm, Foam, Jelly
   (e) Condoms
   (f) Female sterilization
   (g) Norplant
   (h) Male sterilization
   (i) Natural methods
   (f) Withdrawal
Appendix IV: Position Of Nairobi In Kenya
Appendix VI: Adolescent Pregnancy Project Location Dagoretti

[Map showing the location of Dagoretti with labeled areas such as Uthiru, Uthiru/Ruthimitu, Mutuni, and Kiruta.]
TO WHOM IT MAY CONCERN

PRISCILLA NJERI KABUE

The above named person is a full time student in this University. She is registered in the Department of Zoology for a M.Sc degree programme in Public Health and Epidemiology.

She has informed us that she wishes to apply for support from your organisation for her research proposal entitled "Maternal awareness of reproductive health and its impact on adolescent pregnancy in Nairobi, Kenya.

Her application has our strong support especially in view of the fact that her degree programme is virtually new in this institution and because her research work will not only be of benefit to Kenya, but to the developing Nations in general.

This is therefore to confirm that this institution approves her proposed research work. She will have all the support that she will require as regards preparation of her thesis.

Yours Faithfully,

J. M. MATTIMA

For: DEAN, FACULTY OF SCIENCE

29 JUN 1998
TO WHOM IT MAY CONCERN

Priscillah Njeri Kabue an MPH student at Kenyatta University is carrying out a study on maternal awareness on reproductive health and its impact on adolescent pregnancy in Dagorett which is our catchment area.

The results of her study will assist us to plan for the health care for the adolescence in the division.

DR. J. A. MAENDE
MEDICAL SUPERINTENDENT
The Permanent Secretary,
Office of the President,
P.O Box 30510,
NAIROBI.

Dear Sir,

RE: CLEARANCE TO DO RESEARCH.
Kenyatta University has started a M.Sc degree programme in Public Health and Epidemiology. The Department of Zoology in the Faculty of Science is administering the programme.
We will appreciate if you will give clearance to the following students to conduct research in their chosen areas of study:-

1. **Robert Kamugi Maina - Reg. No. 156/8526/98**
   Title: Knowledge, perceptions and practice of family planning among married male factory workers in Thika, Kenya.
   Duration: September, 1999 to March 2000.

2. **Elizabeth Kurwa Ambani - Reg. No Reg. 156/8527/98**
   Title: Cervical Cancer in Kenya: Knowledge, attitudes and practices among Women in Dagoretti, Nairobi.
   Duration: September 1999 to March 2000.

3. **Priscillah Nieri Kabue- Reg. No. 156/8528/98.**
   Title: Maternal awareness of reproductive health and communication in relation to adolescent pregnancy in Dagoretti, Nairobi.
   Duration: September 1999 to March 2000.

Yours Faithfully,

J.M. MAITIMA,
For: Dean, Faculty of Science.
TO WHOM IT MAY CONCERN

RE: 1. PRISCILLA NJERI KABUE
     2. ELIZABETH KURWA AMBANI

This is to introduce and certify that the above named, who are MPH post-graduate students at Kenyatta University who are attached to AMREF for their fieldwork.

Their research work will be in Dagoreti Division based at AMREF IMIHV Health Centre. Findings from their research will be used to improve health services at the centre.

This is therefore to request you offer them support that they will require during their fieldwork.

Yours sincerely

DR. ELIAB SERONY SOME, MBchB, MPH, PhD
Head, Strategic Planning & Monitoring Office

cc: Post-graduate Studies Coordinator
    Zoology Department
    Kenyatta University
    P.O. Box 43844
    Nairobi