



A REVIEW OF RESEARCH IN ADOLESCENT FERTILITY IN KENYA

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1.FOREWORD

This was the first research activity to be conducted by the centre for the Study of Adolescence, following its founding in February 1988. The task was carried out by the two members on behalf of the centre. It involved searching for all available research, report and dissertation papers on adolescent fertility in Kenya. They went through various libraries, and University departments in search of these papers. These were then summarised into two main forms by topics and in a bibliographic form. They also identified the research gaps that exist, and which require study. After compilation of all these, the document was distributed to all the CSA members for scrutiny. It was exhaustively discussed in a workshop held at the Safari Hotel Nairobi on 22/10/88, following which this final document was produced.

On behalf of the CSA, I wish to extend our sincere gratitude to the two members for their tireless effort in producing this document and in time. To the research assistants, library staff and various departmental staff who assisted in tracing the references, papers and dissertations we are very grateful. The contributions made by members of CSA in the way of criticisms corrections etc, were invaluable, and to each one of them I say thank you.

In conclusion, I would like to say on behalf of the Centre, that while the two members did their best in tracing all available research/report papers or dissertations on adolescent fertility in Kenya, they cannot guarantee that none was omitted. If any was, it was not intentional. It is our hope that in the course of undating the document these may be incorporated.

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2.INTRODUCTION

The Centre for the Study of Adolescence (CSA), formerly known as the Adolescent Fertility Group (ADOFEG) was inaugurated on 13/02/88. It is a consortium of professionals from various disciplines, with one common interest Adolescent Fertility.

The main goal of CSA is to reduce adolescent fertility and related problems. In order to realize this goal, the CSA has identified a number of strategies. One of the, and an initial one, is to collect and compile all the available information related to adolescent fertility in Kenya. This will then be disseminated, to various interested parties, so as to raise the awareness on issues related to adolescent fertility.

At the inaugural workshop of the CSA, it was realized that there have been a number of research activities on adolescent fertility conducted in Kenya. It was also felt that most of these activities were not know to most of the members, or other researchers interested in this area. It was therefore, agreed that the first activity of the CSA ill be to compile all the past and current research on Adolescent Fertility in Kenya.

The CSA noted the existence of two documents which had attempted to compile research and other papers on issues related to Adolescent Fertility in Kenya. These are "Review of the issues in Adolescent Fertility in Kenya to 1985" by Mugo Gachuhi (1986); and "Adolescent Fertility Proceedings of A Workshop held at Kwale Coast Province Kenya August 1986 edited by K.O. Rogo, 1986.

In the first document, Gachuhi, among other things, reviewed written materials on the problem and management of adolescent fertility in Kenya. He also identified and reviewed research and other activities in the field of adolescent fertility up to 1985. He reviewed the census reports of 1969 and 1979; the Kenya Fertility Survey (1977-1978); the Kenya Contraceptive Prevalence Survey of 1984; unpublished theses of students at University of Nairobi and other research reports up to 1985.

In the second document, Rogo, compiled research papers and other reports that were presented at the first multidisciplinary workshop on Adolescent Fertility held at Kwale in Mombasa. They are papers presented by religious leaders sociologists, medical professionals, school curriculum planners and Lawyers. These are summarized in Part B on pages 15 to 59.

While acknowledging the existence of these documents, the CSA realized that there was need for a more comprehensive record and regular updating of all existing and on-going research in the field of Adolescent Fertility in Kenya.

Hence the purpose of this exercise. The objectives of the exercise were:

- (i) To prepare a document of past and current research, so as to enable the members of CSA, and other interested persons to know what has or is being done in the area of Adolescent Fertility in Kenya.
- (ii) To monitor on-going research in the area and regularly update the document.

The task was delegated to a group of member of CSA.

The document is divided into two parts:

- (i) Part A: - is a summary of the past and current research by topics
- (ii) Part B: - is a summary of the research by authors in a bibliographic form.

PART A: SUMMARY OF RESEARCH BY TOPICS

1. ADOLESCENCE DEFINITION

Various studies carried out in Kenya have used different criteria in defining the adolescent and adolescence. However, age is the common characteristic used in the definition of adolescence.

According to the Kenya Fertility Survey (1977), the adolescent is one who is aged between 15 and 19 years. Garbrah on the other hand discusses the "age sets" and age-grades" as the traditional Kenyan contexts within which adolescence was defined. Using the term "Youth" interchangeably with "adolescents", Garbrah describes adolescents as those aged 15 and 25 years.

Mati, defines adolescence as that period between menarche (for the females) and 21 years.

So far there is no literature available showing an agreement on how the adolescent and adolescence should be defined. The WHO in 1974 defined adolescence as that period in one's life between 10 and 20 years in which:

- (i) The individual progresses from the point of initial appearance of the secondary sexual characteristics to that of sexes maturity.
- (ii) The individual's psychological process and patterns of identification develop from those of a child to those of an adult.
- (iii) A transition is made from a state of total socio-economic dependence to one of relative independence.

One of the initial tasks of the CSA may be to come up with a working definition of Adolescence and Adolescents in Kenya, so as to have uniformity.

A few studies have documented the socio-demographic and socio-economic characteristics of Adolescents in Kenya. Among these are the Kenya Fertility Survey (KFS) 1978, the 1979 Population Census Reports, and the Contraceptive Prevalence Survey (KCPS, 1984). Gyepi Garbrah (1985) quoted these documents extensively in providing data on the adolescents' marital status, fertility rates, educational levels, occupational status, desired number of children and contraceptive knowledge.

According to Garbrah, the adolescent population differs from the older population in Kenya in that it is more educated, tends to be more mobile and urbanized, has low labour force participation rates, tends to marry later and have more unstable marriages. Omondi Ahawo (1981) concurs with the assertion that adolescent marriages are more unstable than those contracted by older groups.

2.LEVELS OF ADOLESCENT FERTILITY

A number of studies have shown that adolescent fertility rates in Kenya are very high and that adolescents contribute a significant proportion to the high population, Census of Kenya (1979), Contraceptive Prevalence Survey (1984); Garbrah (1985).

According to Garbrah, Kenya has maintained high fertility rates for a long time and the level of adolescent fertility in Kenya is among the highest in Africa. This is demonstrated by the fact that the adolescent fertility rate among the 15 to 19 year olds rose from 141 births per 1000 in 1962 to 168 births per 1000 in 1977. He also states that the rates among the older adolescents (20 to 24 years) which rose from 304 to 342 births per 1000 between 1962 and 1978, are the highest in Africa. The latest fertility rate for 15 to 19 year olds is 142 births per 1000 (KCPS, 1984), although there is a substantial regional variation round the national mean.

Studies done in specific areas of Kenya have demonstrated varying levels of adolescent fertility. Voorhoeve et al (1979) showed an incidence of teenage pregnancy of 10% in Machakos. Muraya and Mati (1985) in a study of 628 girls up to 24 years of age who had delivered between October 1981 and December 1983 found that 26.1% had more than 1 child. In another study by Sanghvi et al (1983) 18.6% of all deliveries over a 7 week period (from 15/6/81 to 4/8/81) were to mothers aged under 19 years and 26.1% of them had had one or more previous pregnancies. K'Oduol (1986) in a study at the Pumwani Maternity Hospital showed that 28% of 3151 deliveries were to adolescents with a parity of 1.03 on average for the under 16 year olds and 1.35 for those aged 17 to 20 years. Mumia (1986) working at Eldoret District Hospital studied the obstetrical and gynaecological admissions and records between January and June 1986. Of the 1658 deliveries in the Hospital, 307 were to adolescents, 14% of whom had had previous pregnancies. In two other similar studies carried out in Kisii and Kericho District Hospitals at about the same period, the findings reported below showed that the adolescents have a significant contribution to the population increase and fertility rates in Kenya.

Obwaka (1986) working at Kisii District Hospital found that 31.5% of 1521 deliveries in the hospital were to women under 20 years of age. Similarly Achapa (1986) in Kericho found that out of the 2024 deliveries in the Hospital, 26% were to adolescent mothers. Kabira (1986) in a study at Chogoria Hospital in Meru in 1986, found that 16 to 20% of the deliveries at the hospital were to adolescent women under 19 years.

Most of these studies have been based on hospital records. There is need for further studies outside the hospital setting in order to determine the adolescent fertility rates at the community level. Together with this, more comparable data should be obtained from hospitals which have not yet made reports in order to get a picture of the fertility rates in various parts of the country.

Most of the available data on adolescent pregnancies in Kenya is on schoolgirl pregnancy and school dropout rates and a few hospital-based delivery or abortion records (Njau 1980; Khasiani 1985; Ferguson 1988; Aggarwal and Mati 1982; Sanghvi et al 1982; Ngoka and Mati 1980).

Khasiani (1985) in a study involving 109 girls in Nairobi who were pregnant and had dropped out of school as well as those in school, found that most of them became pregnant between the ages of 15 and 18 years, and came from low income brackets. The same study showed that about 43.1% of the girls who became pregnant had not been exposed to contraceptive information, and came from stable homes where both parents were staying together. Lema (1987) states that these girls tend to also come from mixed and private day schools.

Ferguson, (1988) gives a detailed picture of the schoolgirl drop out rates, patterns and numbers in Kenya. In this study, Ferguson monitored 20,000 secondary school girls and 9000 primary school girls in 166 schools. The findings show that the overall dropout rate in 1987 was 8.61 girls per 1000 compared with 12.3 per 1000 in 1986 and 1024 per 1000 in 1986. He also found that primary school rates were lower than those of secondary schools in 1985 and 1987 but higher in 1986. This study also points out that the dropout rates in Harambee secondary schools are significantly higher than those in Government-maintained or private secondary schools. They were also higher in the day schools, mixed secondary schools and schools which have relatively small number so for girls. He also found that the drop outs tend to be much older than average for their class and that the rates are much higher in the exit classes i.e. Standard eight and from four than the other classes.

There is need to understand the background characteristics of the out of school adolescents who become pregnant, as this information is currently lacking.

There is also need to study the characteristics of the males responsible for the girls pregnancies, as well as the parental role in contributing to the development of this problem. Ferguson" study suggests that age-mates are the main culprits.

On their attitudes towards premarital pregnancy, Khasiani (1985) noted that most adolescents have negative attitudes, and that they don't wish to become pregnant.

However, this desire is not strictly matched with efforts to prevent pregnancy as will be seen in section 7 below.

In her study on policy makers attitudes towards teenage pregnancy in Nairobi, Kariuki (1985) confirmed this negative attitude among the girls themselves, their parents, teachers, some members of parliament and church teachers.

3.THE DETERMINANTS OF ADOLESCENT FERTILITY

A number of factors have been shown to contribute to the high fertility rates among the adolescents in Kenya. Garbrah (1985) attributed the high adolescent fertility rates to the improvement in the general health and nutritional conditions. He also mentions the relationship between age, fertility and residence. According to him, the 20-24 year olds contributed 21% of all the fertility in 1976, while the 15 to 19 year olds contributed 11% to all fertility.

As regards education and fertility, the over- 24 year olds with primary education tended to have highest fertility rates than those in the rural areas.

The reasons for the lower rates in the urban areas as explained by Garbrah are the housing shortages, higher rents and more prolonged female education in urban areas (KFS 1977,KECA 1979, UNECA 1979)

Khasiani (1985) in a study done in Nairobi, argues that adolescent fertility is related to high levels of sexual activity among adolescents and the accompanying lack of contraception. She also associates adolescent fertility rates with the family and socio-economic backgrounds of the adolescents. Girls from low income groups are more likely to have higher fertility than those from high income groups.

There is need for further research to identify the other possible determinants of adolescent fertility in Kenya such as the cultural and religious background, breakdown in the traditional mores and restraints, rural-urban migration etc.

There is also need to expand on the areas so far covered in these studies, so as to have national data on the determinants as well as the regional or ethnic variations.

4.ADOLESCENT SEXUALITY

A few knowledge, attitude, and practice (KAP) studies have been done on adolescent sexuality and related issues in Kenya.

Most researchers in this area agree that the adolescents in Kenya have high levels of sexual activity inspite of the low levels of related knowledge and accurate information (Gachuhi 1974; Wanjohi 1986; Maggwa 1987; Lema 1987).

Gachuhi (1974) found that among the 1361 young people he interviewed in Kenya schools and colleges, 83% of the males and 46.1% of the females had had sexual intercourse at the time of the study. Maggwa (1987) in a study in Machakos rural area, found that out of the 1434 students interviewed 57.7% had had sexual intercourse. Lema 1987 found that 23.8% of the 1751 girls interviewed in Nairobi secondary schools had been or were sexually active at the time of the study.

These studies also indicate that the adolescents are engaging in sexual activities at quite early ages. (Sanghvi et al 1983, Gachuhi 1974, Maggwa 1987, Lema 1987). According to these studies, the mean age at first intercourse was 13 years for boys and 14 for girls (Maggwa 1987). Lema (1987) found about 4.1% of his interviewees who were sexually active had had first coitus before their 10th birthday. According to Lema (1987) and Kibunguchy (1985), the peak age at first coitus was 16 years.

Lema's (1987) study indicated that the urban girls were possibly involved with more mature and self-supporting male friends suggesting a possible monetary r other such factor in operation. Njau (Ongoing study) in the rural areas of Kiambu, has found that coitus takes place in the boys hut or "cubes" and in the grass, maize, coffee or tea plantations which these adolescents have termed "Green Lodges" or Snake Parks". There is evidence also from Njau's study that in rural Kiambu, most girls engage in coitus with boys of about the same age or slightly older.

With regard to attitudes towards sex, Maggwa (1987), Lema (1987) and Njau (Ongoing) have done studies of adolescent, Lema's study showed that most (77.8%) of the girls interviewed in Nairobi felt it was wrong for schools girls to have sexual intercourse. About 59.1% of the sexually active girls did not want to have sexual intercourse when it occurred, while 54.3% said they had not enjoyed it. The question one asks then, is why they engaged in sex if they did not want or enjoy it. Wanjohi (1986) found that most boys engaged in sexual intercourse because in it they saw a cure for wet dreams.

While Njau found that most girls felt sexual intercourse was allowable as long as pregnancy does not occur. Maggwa's Machakos study showed that 79.4% of the girls and 69.3% of the boys said that sex was not enjoyable when planned for. This, therefore, suggests that most of the time, the adolescents have unplanned sexual intercourse, which was revealed in Lema's study.

Adolescents' attitude towards sex are related to their perceptions of boy/girlfriend relationships. According to Lema (1987) and Kabira, over 50% of adolescents have boy/girlfriend relationships and over 56.6% think it is allowable for them to have these relationships.

Studies have indicated that the adolescents are, most of the time, not aware of the consequences of these heterosexual relationships. Njau is exploring the girls and boys relationships towards each other in these boy/girl friend relationships. There is evidence from this study that boys want to have sex with girls as an end in itself and to satisfy themselves while the girls have sexual intercourse because they "love" the boys and want to please them. The girls also see sex as a step towards marriage and long-lasting commitment and relationship.

Further and more exhaustive research is required to assess the attitudes of adolescents and their parents towards sex.

Most studies indicate that adolescents have a very low level of knowledge and information concerning sexual matters (Gachuhi 1973, 1974; Garbrah 1985; Muroki 1987; Maggwa 1987; Lema 1987; Njau (Ongoing). These studies have also shown that this knowledge and information is in most cases inaccurate, wrong or incomplete. Wanjohi (1986) and Njau (Ongoing), have attempted to understand the contents of the adolescent sexual information. Wanjohi has so far found that boys had been told that sexual intercourse cures wet dreams. Njau has so far found that girls have been told that sexual intercourse keeps their birth canals open to avoid permanent closure and consequent pain during marriage and childbirth.

The nature of the adolescents' sexual information is related to its sources as shown by these studies, most of which have indicated that friends are the main source of information, followed by teachers in schools, while the parents and church play the least role in imparting this information to the adolescents (Garbrah 1985; Wanjohi 1986; Lema 1987; Maggwa 1987). In Njau's study most girls received sexual information from their boyfriends, more than they do from their girlfriends. Boys on the other hand, received sexual information from other boys. Although teachers are mentioned as an important source of sexual information, Gachuhi (1972) notes that the teachers experience a lot of problems in handling the topic of sexuality. Ferguson (1988) notes that many teachers had problems in conveying correct information for most of them had received no proper guidance themselves.

Most of these researchers recommend that there is need to encourage and intensify the provision of sex education to the adolescents, so as to equip them adequately.

5. THE DETERMINANTS OF ADOLESCENT SEXUAL ACTIVITIES

A number of factors have been associated with levels of adolescent sexual activities (Khasiani 1985; Lema 1987; Maggwa 1987). Both Lema and Maggwa argue that sexual activity is associated with age, with older adolescents having higher levels of sexual activity than the younger ones. Boys have a higher level of sexual activity than girls (Gachuhi 1974; Maggwa 1987). Educational level is also related to the level of sexual activity among adolescents (Lema 1987; Maggwa 1987). Research evidence shows that adolescents in higher classes have higher levels of sexual activity than those in the lower classes with the peak being in form IV among girls (Lema 1987; Maggwa 1987; Ferguson 1988). Lema also related poor academic performance among the adolescent girls with higher levels of sexual activity. Njau has tried to explore the reasons for high levels of sexual activity in the exit years from school. She has found that the girls are planning to settle in marriage as they leave school. Having poor performance in class gives them no other or better alternative in life, both academically and socially.

Research also suggests that adolescents who stay with friends are more likely to be sexually active than those who stay with their parents (Lema 1987). This situation leads to lack of parental guidance and vulnerability to peer group pressures (Wanjohi 1986)

Khasiani (1985) has associated sexual activity among adolescents with socio-economic conditions, arguing that the poor girls are more active sexually.

Research is needed to assess how other factors such as religion, culture and psychological factors are related to levels of sexual activities among the adolescents.

Finally, most of the research reviewed has concentrated on the school going female population. There is need therefore to involve and cover the out-of-school female population as well.

6. MENARCHE

It has been shown by various studies in this area that the age at menarche is falling steadily in Kenya. In a study of Luhya girls, Muroki (1987) found that the mean age at menarche was 14.3 +/- 1.4 years. Garbrah (1985) and Rogo et al (1987), agree with this mean age. According to Muroki, the age at menarche is inversely proportional to the socio-economic status of the girl's family, with 13.9 +/- 1.3 years for high income bracket and 14.4 +/- 1.2 years for low income brackets. Rogo et al (1987) give the overall range of age at menarche as between 9 to 16.5 years.

Studies on the level of knowledge concerning menarche and menstruation have shown that, although over 80% of adolescent girls know about menstruation, they did not actually know where blood comes from (Lema 1987; Maggwa (1987); Muroki (1987),. According to these researchers, the adolescents get information concerning menarche from friends, teachers, nurses, and book. Their parents seem to play a minor role in this area. According to Rogo et al (1987) 73.9% of adolescent girls in selected secondary schools received information related to menarche from these other sources, while only 26.1% received it from their mothers.

Rogo et al (1987) reported that the average duration of menstrual periods in their study population was between 3 and 7 days. In the same study, 70.4% of the girls reported having experienced menstrual pains (dysmenorrhoea) while 29.6% did not experience pain. Muroki (1987) found that 97.2% of the girls had a negative attitude towards menstruation. It is important to note however, that there are no studies directly related to boys' puberty.

7.ADOLESCENTS AND CONTRACEPTION

A number of studies have been done to determine the adolescents' level of contraceptive knowledge, attitude and practice in Kenya (Gachuhi 1972, 1973, 1974, 1975; Aggarwal and Mati 1982; Sanghvi 1984; Njoroge 1984; Khasiani 1985; Maggwa 1987; Lema 1987;; KCPS 1984).

Most of these studies indicate that though the general level of contraceptive awareness is high among the adolescents, the level of actual use is very low indeed.

Gachuhi (1972) interviewed 320 students aged between 15 and 25 years in Kenya, to determine their knowledge, attitudes and desires for reproduction, contraception and number of children. He found that the level of knowledge on contraception was high, but many of them had not used any contraceptive method. In another study, Gachuhi (1974) interviewed 1361 young people in (very faint) Kenyan schools and colleges aged 13 to 36 years. Of these, 90% have heard about family planning, although only 10% had ever used any and only 8.5% were still using a family planning method. Lema (1987) showed that 82.6% of a total of 1751 adolescent secondary school girls interviewed, knew the meaning of contraception; 72% though they did not know enough to protect themselves against unwanted pregnancy, while only 5.5% of the sexually active had ever used any method of contraception.

Njoroge (1984) in a study involving 184 female undergraduate students at the Nairobi University showed that only 22.3% of the respondents were currently using any method of contraception. Maggwa (1987) showed a low contraceptive practice rate among adolescents, where only 2.6% of the girls and 3.1% of the boys had used any method of contraception. At the national level, the KCPS gave a contraceptive prevalence rate of 8% for 15-19 year olds and 15% for 20-24 year olds with natural methods being the most commonly employed.

Among the contraceptive methods most commonly used by these adolescents are safe days, (Njoroge 1984); then condoms and last on the list is the IUCD. Although the safe period is the most popular method among the adolescents, Lema (1987) showed 70% of the respondents did not know the safe periods in a menstrual cycle.

Gachuhi (1974) and Njoroge (1984) have identified the sources of contraceptive information among adolescents. Gachuhi found that 53% of the young people interviewed had received the information from lectures by professionals who visited their schools; 22.7% from books; 19.4% from newspapers; 16.0% from friends; 5.4% from films; 5.6% from leaders and 5.2% from relatives; Njoroge on the other hand found that 47.7% had received contraceptive information from their friends at the University.

According to Gachuhi (1974) and Lema (1987), the majority of adolescents were in favour of provision of contraceptive to the adolescents on demand/request. However, Maggwa (1987) found that 80% of his respondents felt that contraceptives are dangerous and sinful.

Among the reasons for non-use of contraceptives, fear of side effects and infrequent nature of sexual intercourse were the main ones in Njoroge's study (1984)

There is need for further research in the area of contraception to determine the reasons for the gap between knowledge and use of contraceptives as well as the accuracy of the knowledge these adolescents have and receive concerning contraception and contraceptives.

8. OBSTETRIC ASPECTS OF ADOLESCENT PREGNANCY

Very few studies have been conducted on the antenatal care and delivery of pregnant teenagers. Njogu (1980) and Sanghvi et al (1983) agree that the overall quality of antenatal care among teenagers is very low. There is need to carry out more research to determine the reasons for this. Sanghvi et al (1983) also found that in terms of delivery, the teenage prim gravida perform just as well as the other primigradae. In their study, 89.8% of the teenagers had spontaneous vertex delivery while only 2.3% had operative vaginal delivery and 4.7% had caesarian section. However, they had twice the incidence of low birth weight babies. Teenagers had premature deliveries in about 23.9% of cases and a perinatal mortality of 45 per 1000, Ngoka and Mati (1980) had similar findings.

There is need for more research on the performance of adolescents in delivery and the outcome of the pregnancy and delivery in other areas of the country.

Most of the studies on abortion are based on hospital records (Aggarwal and Mati (1982); Muraya and Mati (1985); Aggarwal (1980); Makokha (1980).

In a study involving 610 abortion cases admitted at the Kenyatta National Hospital between May and October 1981, Aggarwal and Mati (1982) noted that 28% of the patients were aged below 19 years. Most patients, presenting with abortions are single, in school or unemployed, and not using any method of contraception. Most of these abortions were induced outside the hospital.

Makokha (1980) in his study on maternal mortality at Kenyatta National Hospital, between 1972 and 1977, found that abortion contributes considerable to maternal mortality and especially among the adolescents. Most of the abortion deaths were as a result of sepsis and perforation of the uterus during the termination of the pregnancy.

Since most of the information on abortion and its complication is hospital based and mainly in Nairobi, there is need for further research in the out-of-institution population and in areas other than Nairobi. More information on the characteristics of the adolescents who present with abortion is required policy related research is important and anthropological studies of the providers and recipients of illegal abortions would have great bearing on adolescents.

Studies in the field of maternal mortality and morbidity indicate that maternal mortality amongst adolescents is high (Mati and Aggarwal (1983); Muraya and Mati (1985); Makokha (1980).

In his study at the Kenyatta National Hospital, Makokha (1980) found a total maternal mortality rate of 1.96 per 1000 deliveries. He also found that women aged between 15 and 20 years formed 26.3% and 15 to 25 years formed 51.6% of all the maternal deaths. 39.4% of all the mothers who died were single. The major causes of mortality in this study were, post-abortal sepsis, puerperal sepsis, and haemorrhage.

Muraya and Mati (1985) showed that the younger pregnant women were less likely to suffer from anaemia than the older groups, however they were more likely to develop hypertension.

9. THE SOCIAL CONSEQUENCES OF ADOLESCENT PREGNANCY

A few studies have identified the social and economic consequences of adolescent pregnancy mainly among school girl population (Njogu 1980); Khasiani 1985).

One of the major problems associated with adolescent pregnancy is the high dropout rates from schools. Khasiani (1985) found that most of the girls who got pregnant while in school, are forced to drop out, and do not get opportunities to resume or continue with education later on.

Some of the issues that make it difficult for the schoolgirls who drop out to go back to school are also discussed. These include, among others, lack of assistance in caring for the baby, negative attitudes in school, burden of school fees and childbearing and reluctance on the part of the girls to go back to the old schools.

Given that education is very much related to other life opportunities, the school drop-outs experience a lot of socio-economic problems such as lack of employment opportunities, lack of money to support themselves and their offsprings, dependency on their parents etc. (Khasiani 1985; Too 1988).

In an earlier study among schoolgirls in Naivasha, Njogu (1980) found that girls who dropped out of school due to pregnancy had psychological problems and were unable to feed and clothe their babies adequately. Further research is required to provide details on the nature and extend of the long-term consequences of adolescent pregnancy particularly on their offsprings.

PART B: BIBLIOGRAPHIC SUMMARIES

1. Aggarwal, V.P. and Mati, J.K.G. (1980). Review of abortions at Kenyatta National Hospital. E. Afri.Med.J. 57L 138.

- 1424 patients admitted with abortions to KNH from 1st January 1978 to 30 June 1978 are presented.
- 16% were suspected to be induced. The induced abortions were common in adolescent and single girls.
- The mean hospital stay in the induced group was 91 hours vs 39 hours in the non-septic group.
- On average, there were 2 maternal deaths per 1000 abortion admissions, dying of complications of septic abortion.
- Of the septic abortions 53% were aged 14 to 20 years with a mean age of 19.8 years.
- Of the non-septic group 55% were in the age group 21 to 30 years with a mean of 23.3 years.
- Of the septic group only 25.9% were married while 74.1% were not married, and of the non-septic group 65% were married and 35% unmarried.
- Of all the patients studied, 37.7% were aged 14 to 20 years. While 35.9% were aged 21 to 25 years. 35.3% of them were single.
- Only 7% of all the patients were using contraceptive when they became pregnant.
- Patients with septic abortions were mainly single adolescent girls and, in most of these, this was their first pregnancy.

Conclusions and Recommendations

- In spite of restrictive laws, induced abortion is occurring in this region.
- It seems that abortion is used as a method of fertility control.
- The methods used to procure the abortion constitute risks to life and health.
- To avoid all these complications and later suffering, emphasis should be put on prevention, expanded programmes and facilities for sex education and contraception, whose success would reduce the number of unwanted pregnancies and abortions.

2. Aggarwal, V.P., Mati, J.K.G. (1982). Epidemiology of Induced Abortion in Nairobi, Kenya. J Obst.Gyn.E.Centr. Afr.1:54.

-610 patients admitted with abortion to KNH, May to October 1981 are presented. These were 1/3 of 1832 total patients with abortions, admitted in the same period (1:3 sampling).

-60% of the admissions to the acute gynaecological ward were patients with abortions. (1832/3084).

-35.6% of the patients volunteered a history of interference to the pregnancy.

-Another 26.7% probably had interfered with their pregnancies, thus approximately 62.3% of the total abortion admissions were induced or likely to have been induced.

-The ages ranged from 13 to 44 years with a mean of 24.2 years. 28% were aged below 19 years.

-In the definitely induced group 43.7% were below 19 years old as compared to 18% in the non interference group.

-42% of the patients were single girls.

-79% of the single girls in the study were in the induced group.

-60% of the patients in induced group were either unemployed or schoolgirls and most of them were single.

-Only 20% of all the patients had used any contraceptive method in the previous 12 months.

-Of these - 76% had used the oral pills

-20% had used the IUCD

-3% had used the injectables

-Only 7% of the schoolgirls were aware of the availability of contraceptive methods.

-Only 6% of the total cases attempted to avoid the current pregnancy by using available methods of contraception.

3. Ferguson, A. (March 1988). Schoolgirl Pregnancy in Kenya. Report of a Study of discontinuation rates and associated Factors. Ministry of Health, Division of Family Health GTZ Support Unit Nairobi.

This study was based on a sample of 166 schools in the mainly population areas of Kenya and monitored a schoolgirl population of about 20,000 in secondary schools and 9,000 in primary schools with a view to establishing drop-out rates, numbers, and characteristics associated with variations in these rates in the years 1985-1987.

For 1987, some information on the attitudes of the teachers to the schoolgirl pregnancy problem was gathered and more detailed information about the 256 girls dropping out of the sampled schools for reasons associated with pregnancy was obtained.

The main results are summarized as follows:

-The overall drop out rate in 1987 was 8.61 girls per thousand compared with 12.13 per 1000 in 1986 and 1024 per 1000 in 1985. Primary school rates were lower than those of secondary schools in 1985 and 1987 but above in 1986, accounting for much of the overall rise in rates during that year.

-Corresponding most-likely estimates of drop-out numbers in the whole of Kenya suggest that over 8000 girls dropped out because of pregnancy in 1987, over 13,000 in 1986 and over 9000 in 1985.

-Drop out rates in Harambee secondary schools are significantly higher than those in government maintained or private secondary schools.

-Drop out rates are higher in day, and mixed secondary schools which have relatively small numbers of girls.

-Even allowing for variations caused by the different provincial mix of schools, there is a strong regional component. Rift Valley and Nyanza provinces have consistently high drop-out rates while Central, Coast and Nairobi record below average drop-out rates.

-Over half of the conceptions leading to pregnancy-related drop out occur during school holidays. Girls who are boarders are well-protected during term-time but have relatively more conceptions during holiday times than girls who are day scholars.

-Drop-outs tend to be much older than average for their class. The median age for drop-outs in primary schools is 16 years, and that of secondary schools, 18 years. Most drop-outs have an academic performance below average for their class.

-Drop-out rates are much higher in the exit classes-standard 8 and Form 4 than in the other classes.

-Less than 40% of the 1987 drop outs revealed the identity of the father of the child. Of those who did, most males responsible were age mates. Teachers made up only a few of the older men responsible.

-Senior teachers at the sampled schools perceived lack of discipline and control by parents to be the main factor behind the problem, with ignorance of reproduction and the existence of poverty, leading to the role of "sugar daddies", also seen as major influences.

-Only 15% of schools included methods of contraception in the teaching of reproductive biology while some 60% approved the inclusion of contraception in this curriculum.

-Recommendations suggest that parents need to be actively brought together with teachers and trained in the teaching of reproductive biology which is more explicitly concerned with human reproduction and its social context. The parent-teacher association is suggested as the main entry point. Training of parent-teacher trainers is strongly recommended.

-Prioritization of interventions is suggested, recognizing the more urgent needs of pupils in Harambee schools and in the parts of the country where drop-out levels are highest.

-It is recommended that efforts to remove obstacles to the provision of effective contraception to adolescents be strongly encouraged.

4. Gachuhi, M.J. (1970). The role and impact of self-help schools in a Kenyan Community of Chinga. Dissertation for Ph.D State University of New York at Buffalo.

-The need to educate girls as cited by the local people of Chinga (Kenyan)

The reasons for this were:

-The need to have educated

- Local girls being employed as secretaries in big offices in Nairobi
- Local girls being employed as Nurses in their own hospitals to treat them
- Local girls to socialise with and marry their educated boys.

Before that the local people had felt that educating girls was a waste because:

- They would marry even before finishing school
- They did not provide economic security in old days like boys did

****This shows the way girls were viewed and treated and the changing attitudes and realization of the value of educating girls just like boys.**

****Our Comment**

5. Gachuhi, J.M. (1972). Population Education for our schools. Working Paper No. 27 IDS University of Nairobi.

This paper was concerned with the introduction of population education in our school system.

Conclusion

The inclusion of population education in school curriculum within the short and long term will make education more meaningful to the individual and the society at large.

This is an issue that concerns the future welfare of our community, as the youth of today will be the fathers/mothers/leaders of tomorrow. There is need therefore to make them aware of important issues concerning the country and its welfare, population being one of them, and one of which they can contribute to meaningfully.

6. Gachuhi, J.M. (1972). Kenya Youth: Their sexual knowledge and practice Discussion Paper No. 159: IDS University of Nairobi.

-320 students aged 15 to 25 years were interviewed by means of a questionnaire, January to April 1972. These were students in Teachers' Training, Secretarial and Commercial Colleges and Secondary Schools in and around Nairobi.

-The respondents came from 24 Kenyan Districts, parts of Uganda and Tanzania.

-The aim was to determine knowledge, attitude and desires of the young people concerning reproduction, family planning, and number of children, type of work and place of residence.

Results

-The knowledge level concerning reproduction was very low indeed.

-They know a great deal about contraceptives even though many of them had never used or seen any.

-For the majority, the desired number of children was 4.

-The boys want fewer children than the girls.

-The males prefer residing in the countryside while the females preferred towns.

-25% of both girls and boys knew the safe days, yet the method relied upon mostly for contraception in this group was the "safe period".

-Years of formal education (in school) did not make much difference in terms of knowledge of contraceptives, but it did on the level of knowledge of reproduction.

Recommendations

There is need to:

-Educate the youth on:

-Reproduction

-Family planning

-Population issues as part of formal teaching.

-All efforts to "solve" our "population crisis" are directed towards fecund women and not effort is being made to educate those who will be entering the reproductive category in the next few years.

7. Gachuhi J.M. (1973). Venereal Disease and Society. Discussion Paper No. 178. IDS University of Nairobi.

Conclusions

-Sex education should be encouraged and taught.

-The teachers may not be well equipped to do it because of societal ignorance and fear of venereal disease and lack of factual information which they can impart to the students.

8.Gachuhi, J.M. (1974). African Youth and Family Planning knowledge Attitude and Practice. Discussion Paper No. 189. IDS University of Nairobi.

-1361 young people in 8 Kenya schools and Colleges were interviewed by means of a questionnaire.

-72% were males aged 13 to 36 years

-28% were females aged 16 to 29 years

Basically all districts of Kenya were represented.

Results

90% of them had heard about contraceptives, and of these:

-53% had received the information from professionals who visited their schools.

-22.7% from books

-19.4% from newspapers

-16.0% from friends

-7.4% from films

-5.6% from community leaders

-5.2% from relatives

AGE AT FIRST COITUS

	15 YRS	16-19	20-24	25-29	NEVER	DON'T REMEMBER
BOYS	478	297	27	1	95	9
GIRLS	28	118	28	4	146	3

-83% of the males had had sexual intercourse while only

-36% of the girls had

Contraceptive Use

Ever use only 10% had ever used a method

Present use only 8.5% were still on a method

Comment

-There is an obvious need for family planning education among young people.

-There is need to include young people in Kenya's Family Planning Programs.

3.9. Gachuhi, J.M. (1974). Family Planning in Kenya and the Problem of Dropouts. Paper presented at the Conference on Law and Population in Africa held from 25-30 November in Nairobi, Kenya

110 women from Kisii District who had dropped out of FP programme were interviewed by means of a questionnaire to find out their reasons for doing so.

Of these 110 women:

Marital status:

- 100 were married
- 5 were unmarried
- 4 were widowed
- 1 was divorced

Ages

- 15-19 = 2
- 20-24 = 17
- 25-29 = 25
- 30-34 = 28
- 35-39 = 20
- 40+ = 18

Method given in the clinics

- Oral pills = 89.1%
- IUCD = 4.6%
- Condom = 2.7%
- None = 2.7%

Reasons for dropping out

- Medical side effects
- Transport problems
- Community pressures
- Wanted to conceive again
- Family disapproval

Conclusion

- Men should be included in family planning programmes
- Women in general do not decide the number of children they want, let alone method of FP.
- The attitudes of the whole community must be taken into account for a programme to attract participants and keep them from dropping out.

9. Gabrah, G.B (1985). Adolescent fertility in Kenya, the Path Finder Fund.

Summary of Key Points

- 1.The youth population aged 15-24 is growing faster than the general population. In 1969, there were 1.8 million adolescent males, and females, in Kenya, forming 17.8% of the total population. At the time of the 1979 census, this figure had risen to 3.1 million or 20.0% of the total population. By 1985, the adolescent population is projected to have reached 3.9 million.
- 2.The adolescent population is more educated than the adult population aged 25 years and over.
- 3.Adolescents professed more to Christian faith than the rest of the population.
- 4.Adolescent tended to live in urban areas. Compared with only 9.9% of Kenya's population residing in urban areas in 1969 the equivalent figure for male and females aged 20-24 were 20% and 13%. And in 1977 the female figure had risen to 29%.
- 5.Generally, because of increased schooling among adolescents, their labour force participation rates are low and falling compared to those of adult population, male adolescents continue to have economic activity rates twice as high as the females.
- 6.Polygamy continues to be an important aspect of Kenya's culture. In 1977, 24% and 22% of married female adolescents aged 15-19 and 20-24 respectively were married to husbands with more than one wife.
- 7.The adolescent population is gradually marrying at later ages. The potential for further increase in their average age at marriage exists because of increase in school attendance rates. There is a tendency to discourage marriage during the period when schooling is being acquired.
- 8.Adolescent marriages tend to be less stable than those within the older population.

Family Planning Services, Sex Education and Counselling

- 1.The country has had an official policy population and a family planning programme since 1967. But access to family planning information and counseling for adolescents is very inadequate, although various groups in the country have been working in the area.
- 2.Programmes on sex education and counselling, under the title of family life education, are presently provided by the member churches of NCCK, FPAK-sponsored youth clubs of the Department of community Development and some secondary schools. These are generally undertaken on a voluntary basis.
- 3.The majority of students and teachers surveyed over the years think family planning education should be provided for adolescents, the need for sex education has also been endorsed by the NCCK and heads of the secondary school.
- 4.Discussions on the incorporation of family life education, with a sex education component into the official curriculum continues. The out-of-school population seems to have been left out completely of efforts to convey these concepts and information.

Reproductive Health Behaviour

- 1.The present generation of adolescents are having children at slightly older ages than earlier generations. Almost all of these births are occurring within marriage. In 1977 only 6.9% of the population aged 20-24 years had their first birth when they were less than 15 years old compared with 9%, 11% and 12%. For those aged 25-29, 30-34 and 35-39 years respectively.
- 2.Adolescents are generally healthier than the general population. Pregnancy-related complications especially among the very young, are worse than those of the adult population. This statement, however, refers particularly to those aged 15-19 who were found to have the highest abortion rates. While some differences exist in the delivery-related complications between adolescent and older women. Kenyan adolescents appear to suffer less complications than their counterparts in other developing countries.

3. Adolescents were generally aware of contraception, but very few use them. The KPS found that 73% for those aged 15-19 and 88% aged 20-24 have heard of at least one method but less than 8% had ever used contraception.

4. The most popular methods of contraception among adolescents are the pill and condom. Abortion is practiced among adolescents, but there is a split of opinion over whether it is acceptable. Forty percent of Igaga's respondents were opposed to it. The larger society condemns it.

5. Adolescent fertility rates are high. They have continued to increase since 1962. The age specific fertility rate of 342 per thousand women aged 20-24 recorded in 1977 is one of the highest, if not the highest, in Africa.

6. Education appears to affect adolescent fertility significantly. The average number of children born to women aged 15-24 and with 9 or more years of education was 0.6 compared with 1.5 for those without education.

7. Urbanization among adolescents also increases fertility rates. The age-specific fertility rate per women for those aged 20-24 residing in urban areas was 0.264 compared with 0.353 for those residing in rural areas in 1973.

Implications for Adolescents Fertility

1. The rising, but still very low, average age at marriage among females contributes substantially in sustaining the high fertility rate in Kenya. This, combined with declining mortality, lies behind the country's accelerated population growth since the 1960's.

2. Pregnancy among young adolescents is one of the principal causes of the rise in school drop outs from elementary through universities and loss of confidence and self-esteem among those affected.

3. Induced abortion is considered a serious public health problem in Kenya. Its incidence and associated complications are high among adolescents, who accounted for the majority of abortion cases admitted at Kenyatta National Hospital in 1978.

4. Complications associated with early childbirth among young adolescents in the country include increased perinatal mortality and premature rupture of membranes, preterm delivery and low birth weight which are also associated with poor antenatal care and poor education among the adolescents. These have serious public health implications because they raise the general level of maternal morbidity and mortality. In addition they tie up available health resources.

5. Most of the very young pregnant adolescents, particularly the unmarried, hesitate in seeking obstetrical care, a practice which tends to negatively affect the treatment outcome of associated complication.

10. Khasian, A.S. (1985). Adolescent Fertility in Kenya with special Reference to High School teenage Pregnancy and Child Bearing. P.S.R.I. University of Nairobi.

The study was carried out in Nairobi, with the aim of determining the social and economic conditions, access to contraceptive and reproductive health information as well as health facilities, training and employment possibilities and constraints of adolescent expectant and nursing mothers who have dropped out of school or face dropping out.

- The girls were interviewed by the researcher herself
- 109 respondents instead of the anticipated 400 were interviewed.

Results

- Most adolescent pregnancies occur between 15 and 18 years of age.
- They are forced to drop out of school as a result of pregnancy
- Most of them are from stable homes (both parents still living together)
- All come from low income neighborhoods in the outskirts of Nairobi
- Most of them have had sex before the age of 15 years.
- Parents play an insignificant part in imparting information on contraception
- 43.1% of them had not been exposed to any kind of contraceptive information, the majority of them being 13-14 years olds
- Sources of information on contraception and reproduction were unreliable, inaccurate, and reaching only a small number of adolescents
- The reasons for not using contraceptives included among others, the belief that they are only meant for married women
- Most adolescent girls are engaging in sexual intercourse
- Although they do not desire pregnancy, they are not using contraceptives to prevent it
- Prior to pregnancy they feel they cannot get pregnant
- The source of knowledge on reproduction and contraceptives is mainly school, but these are purely reproductive courses, no population issues are included in the teaching.

Problems

- The pregnant teenagers are reluctant to attend the clinics for fear of being seen by other people.
- The health services in Kenya are not sensitive to special problems of adolescent pregnant and nursing mothers.
- Society has negative reactions to adolescent fertility.
- Adolescent mothers are seen by society as deviants who should not be assisted
- Economic consequences
- The girls are denied financial and accommodation assistance after pregnancy
- Education, training and employment possibilities
- Termination of girls education and training because:
- They have no one to assist them in taking care of the baby while they are in school
- Of reluctance on the part of the girls to go back to the same old schools for fear of rebuke
- Of negative attitudes of the schools towards these girls
- Of falling behind academically because of the time spent while pregnant, delivering and change of school
- Of burden of school fees and child rearing

Conclusions

- Adolescent pregnancies can be considered to lead to alienation, apathy, high fertility and subsequently extreme poverty.
- There is need for baby care services and costs for supporting mothers and children
- There is need to reintegrate them into the community
- They should be allowed educational/training/job opportunities after delivery so as to ensure a reliable source of livelihood.

12. Kibunguchy, W., Mbugua, S.C.T., Sekadde-Kigonde, C.B., Mati, J.K.G. (1985). Carcinoma of the Cervix and Cervical Intraepithelial Neoplasia (CIN): Screening of a High Risk Group. J. Obst. Gyn. East Centr. Afr. 4:29

1319 patients attending the Nairobi City Commission's

Special Treatment Clinic (STC) cover a 3 months period in 1984 were randomly selected for the study.

-The youngest woman was 15 years old

-57.5% of the screened women were aged 15-24 years old

-The mean age of women with pap class III was 23.5 years

-The prevalence rate of Pap Class III in teenagers was 17 per 1000

-1.1% of these women had first coitus (< 10 years of age while (46.2% had it between 11 and 15 years, 46.7% had it between 16 and 19 years, and 6.0% had it > 20 years of age.

Those women who started sexual lives at 15 years of age or less had a slightly higher prevalence of Pap Class III (1.6%).

13. Kigonde, J.G. (1983). Adolescent Fertility Editorial. J.Obst.Gyn. East Centr.Afr.2:128.

-Unprotected adolescent sexual activity goes counter to any national population control policies.

14. Kulia, H.E., Bwibo, N. Mutie, D. and Santner, S.J. (1982). The Effects of chronic childhood nutrition on pubertal growth and development. Am.J.Clin.Nutr. 36:527.

Puberty growth and development were compared in 342 urban children and 347 rural adolescents in Kenya.

Measurements of height weight, upper arm circumference and triceps skinfolds revealed marked differences between the two study groups just before the onset of sexual maturation.

These differences were also found in the early stages of puberty but notable catch up was evident throughout the later periods of the maturational process.

Early stages of sexual maturation were delayed by 3 years in the malnourished boys with a 2.1 year lag in the age of onset of menarche in rural girls. Derived estimates of body fat as well as direct antropometry revealed that the onset of puberty is not size-related under the circumstances of chronic malnutrition.

15. Kulin, H.E. (1988). Adolescent Pregnancy in Africa: a programmatic focus. Soc. Sci. Med. Vol. 26.7

A paper which raises concern with the high rates of adolescent fertility in Africa and attempts to outline possible programs for dealing with the problem, based on the experience of the developed world together with example existing programs in Kenya and Zimbabwe.

The program described in Kenya concerns recent efforts made by KMA and the Obs/Gny. Department at the University of Nairobi to improve multi-discipline collaboration and to address training needs of pediatricians.

Constraints to the broad application of specialized programmes for adolescents in the African context are discussed, but it is concluded that programmes for adolescents are essential if the fertility problem is to be successfully tackled.

16. Lema, V.M. (1987). A study to determine knowledge, attitude and use of contraception with relationship to sexual knowledge, attitude and behaviour amongst adolescent secondary school girls in a cosmopolitan city in Africa. Dissertation for M.Med Thesis University of Nairobi.

-A study conducted among secondary schoolgirls in Nairobi in 1986. 1751 girls aged between 12 and 19 years were interviewed by means of a self-administered questionnaire.

-80.4% of the girls knew the meaning of puberty and menstruation, but the majority did not know where blood comes in menstruation or where the baby grows in woman's body.

They also did not know the meaning of menarche.

-60.4% of the girls had learnt about these from friends, magazines, movies and books.

Their parents or sisters had played very little part in educating them.

-70.7% did not know the safe days in a menstrual cycle.

-Generally their knowledge of basic reproductive anatomy and physiology was very poor.

-20% of the girls wanted the boys to menstruate like them!

-The lowest age one had a boyfriend (lover) was 9 years. The peak was at 15 years of age.

-There was an increase in the % of girls with boy friends with age and educational level with 86.2% of the form VI girls. There was a tendency for the girls currently in form I to have boyfriends at an earlier age than their elder sisters in the higher forms did. A reflection of changing times?

-The fact that 62.0% of them had boyfriends shows that majority of the secondary school girls in Nairobi had the potential risk of having coitus during their adolescent period and while in school.

-23.8% of the girls had been or were sexually active at the time of the study.

There was a gradual increase in the incidence with age and level of education up to form IV with 17.1% of all form I's, 33.0% of all form IV's, and 16.3% of all form VI girls having had sexual intercourse. The peak was at form IV the explanation for this is not quite clear but it may be due to the fact that (i) those who managed to reach form VI are the same schools which had the lowest incidence of sexually active girls (iii) the proportion of schools with form VI and the girls themselves was small compared to the rest.

-The day, private secondary schools in the city centre had the highest incidence and frequency of sexually active girls. The reasons for this may be:

i. These girls were under restriction for a very short period in a day and free for the whole weekend.

ii. The location of some of these schools leave much to be desired and are conducive to such activities.

In one of them a girl reported to have had sexual intercourse only 5 minutes before the interview most likely during the short break or she did not attend the preceding lesson (the study was conducted at about 3.00 pm)

iii. Majority of these girls may have sex at home/after school, on they way to and from school, or even when they are supposed to be in class, as their parents are unlikely to know if they don't attend classes.

-4.1% of the girls who had been sexually active had started coitus below the age of 10 years. The youngest was 5 years. Some of the girls were still active sexually and did not seem to be remorseful about it.

-The peak age at first coitus was 16 years still a very tender age.

-91.6% of the girls who will have had coitus before their 20th birthday, will have done so by the age of 17 years i.e. while still minors.

-74.8% of the first sexual acts had taken place in a man's house, in his car, or hotel room. This implies that most of the sexually active girls were involved with more mature self-supporting adult male partners. This may point to monetary gains on the part of the girls or some other social or economic factors in operation.

-Most (63.3%) of the acts were not planned, at least on the part of the girls. 59.1 of them did not want it then and 54.3% of them did not enjoy it.

-Girls staying away from both parents were at greater risks of having sexual intercourse, e.g. 70.0% of those staying with friends had been sexually active. This may indicate lack of parental guidance and good example, peer group pressures, breakdown in traditional restraints or monetary gains as their parents are away. Some may have been asked to "pay back in kind" to their supporters, for whatever they are spending on them. It is not very rare for one to hear of a secondary school girl staying in the city/town with her boyfriend while the parent are far away in their rural home.

-62.0% of the girls had a boyfriend, but 56.1% of them felt it was not okay for school girls to have boyfriends (lovers).

-Those who felt it was not were afraid of getting pregnant and interrupting their studies.

-Therefore, 62.0% of the girls had the potential risk of having sexual intercourse, and getting pregnant.

-77.8% of all the girls felt it was wrong for schoolgirls to have sexual intercourse.

-82.6% of the girls knew the meaning of contraception. But 72% of them thought they did not know enough to be able to protect themselves from getting pregnant. Their knowledge of the various methods was very poor.

-Only 5.5% of the girls who were sexually active were or had used any method of contraception, mostly risky/unreliable methods e.g. withdrawal and safe days.

-A majority (>90%) approved of provision of contraceptive methods to all women including schoolgirls on demand, to protect themselves from unwanted pregnancy.

-Most of the girls (95%) expressed great desire and hunger for family life education. They felt this will help in preparing them for future life.

-Among the reasons they gave for the increase in schoolgirl pregnancies were:

1. Monetary gains for the girls
2. Loose morals of the girls these days
3. Lack of parental guidance and good exemplary behaviour by parents
4. Lack of contraceptive services and sex education
5. Overstimulation by the environment around them and media e.g. TV, films, magazines etc.
6. Frustration
7. Use of sex to pass time (i.e. for leisure)
8. Fear of losing a boyfriend etc.

They felt that provision of FLE, legalization of abortion, free provision of contraceptives, good parental guidance and exemplary behaviour, as well as punishment of the male partners responsible for the pregnancies will help reduce these pregnancies.

Recommendations

There is need to:

- 1.Re-evaluate our policies and appraise our thinking as far as the issues of adolescent sexuality and pregnancy, together with provision of FLE and contraceptive advice is concerned.
- 2.Provide FLE and all that it entail. This should preferably be tailored for different age groups and educational levels.
- 3.Provide contraceptive advice to all who need and ask for it.
- 4.Treat and handle the adolescents who are pregnant, having abortion, or venereal diseases with compassion and understanding rather than rebuke so that they may seek medical attention and advice more freely and early.
- 5.Discourage sexual intercourse at a very early age due to inherent medical and social problems to which they may be exposed.
- 6.Encourage and educate parents to be more open and free with their children, as far as issues regarding sex and contraception are concerned, so that they can discuss them freely with their children, thus creating confidence, and so have children confiding in them too.

For "to make a cake one needs a recipe, to make a dress one requires a pattern; and to become a woman an adolescent girl needs an adult model"

17. Liku, J.K.K. (1988). The social-economic factors associated with teenage fertility in Makueni Division.

The study sought to examine the relationship between socio-economic factors and teenage fertility in Makueni Division of Machakos District. It made an attempt to understand the factors that lead a girl to become either a married or unmarried teenage mother. One hundred and ninety-four respondents were interviewed.

According to the study's findings, teenage pregnancies and teenage marriages are related and they promote each other due to the effect of the proximate determinants of fertility which are encouraged with marital unions. Teenage pregnancy and teenage marriage have grave effects on teenage girls' educational careers for they lead to a high drop-out rate among the female school population. Lack of knowledge about the process of conception and maturation was found to be related to teenage fertility and led to indiscriminate involvement. Contraceptive use was found to be negligible while child-parent communication, parental supervision, concern and the meeting of economic needs did not have much influence on teenage fertility.

18. Maggwa, A.B.N. (1987). Knowledge, Attitude, Practice Survey of Sex, Contraception and Teenage Pregnancy Among Teenagers Living in a Rural set up in Kenya. Long Commentary for M. Med Thesis University of Nairobi.

- 1,434 students aged 12-23 years were interviewed by self-administered questionnaire in Machakos District.
- 57.7% of them had been involved in at least one sexual activity.
- More boys than girls had been involved.
- The mean age at first sexual contact was 14.85% +/-1.84 for girls and 13.16 +/-2.50 for boys.
- Sexual activity was higher among the older students, those in higher classes and with poor academic performance.
- Also in students whose parents had low educational levels and those who lived with either of their parents.

- Knowledge about menarche and menstrual cycle was very low.
- 2.6% of the girls and 3.1% of the boys had used contraceptives.
- 79.4% of the girls felt that sex is not enjoyable when planned for
- 69.3% of the boys felt that sex is not enjoyable when planned for.
- 80% of them felt FP methods are dangerous and that it is a sin to use them.
- The knowledge about fertility and sexual practice was poor with <50% showing what could be considered as correct knowledge.
- The most important source of information was teachers followed by friends.
- The parents and church played a very minor role.

Conclusion

- There is a high rate of sexual activity among the students studied.
- Most of the students indulge in sex without any form of protection.
- The level of knowledge is low among these students.
- Their attitudes are generally negative towards the above topics, especially family planning.
- Parents and the Church do not play a significant role in educating teenagers about fertility and sexual matters.
- Formal education does not emphasize topics of direct relevancy to adolescent fertility.

Recommendations

- There is an urgent need to improve knowledge and correct the attitudes of teenagers and adolescents on fertility and sexuality. This can be done by:

(A) Raising awareness of the public on the problem of adolescent sexuality.

(B) Inclusion of topics related to adolescent fertility and sexuality in the curriculum for primary schools starting with Standard VI.

(C) Inclusion of topics e.g. adolescent fertility and sexuality in the curriculum of teachers training institutions and adult classes held in the villages to equip the teachers and parents.

(D) Motivation of parents and the church to play a bigger role in education the teenagers about adolescent fertility and sexuality.

(E) Creation and provision of written literature addressed to the adolescents covering topics related to adolescent fertility and sexuality.

(F) Teenagers are already indulging in sexual activity at a high rate without any protection. This problem should be tackled by making contraceptive services and counseling services available to this group of our population.

19. Makokha, A.E. (1980), Maternal Mortality Kenyatta National Hospital 1972-1977, E. Afr. Med. J. 57:451.

Between 1972 and 1977 there were 20,510 deliveries. Of these there were 99 maternal deaths giving a M.M.R. of 1.96 per 1000 deliveries.

Maternal deaths in relation to age:

15-20 years = 26.3%))-51.6%
21-25 years = 25.3%		
26-30 years = 19.2%		
31-35 years = 8.0%		
>/- 36 years = 3.0%		
Unknown = 18.2%		

Marital status

- 37.4% were married
- 39.4% were single
- 23.2% no marital status stated

Causes included among others

- | | | |
|-------------------------------|---|-------|
| - Post-abortal sepsis = 22.2% |) | 43.4% |
| - Purperal sepsis = 21.2% | | |
| - Haemorrhage = 15.2% | | |

Sepsis and haemorrhage accounted for 58.6% of the deaths.

- Of the patients who died of post-abortal sepsis, nearly 80% of them had evidence of interference.
- 16 of the 39 unmarried mothers died of post-abortal sepsis.
- 2 of the 39 unmarried women died of perforated uterus which occurred during the termination of pregnancy.

Therefore, 86.4% of the deaths from post-abortal sepsis were of unmarried women and many of them were young girls who had just completed school or training and were still unemployed.

20. Mati, J.K.G., Aggarwal, V.P. Lucas, S. and Sanghvi, H.C.G. (1983). The Nairobi Birth Survey IV: Early Perinatal Mortality Rate. J. Obst. Gyn. East Centre. Afr.2:29.

-The study was conducted in Hospitals within Nairobi between 15th June to 4th August 1981 (7 weeks).

-5,293 singleton births took place in these hospitals over this period.

Of these 187 were early perinatal deaths giving an early P.M.R. of 35.6 per 1000 total births.

Factors influencing Early Perinatal Mortality Rates were:

(a)- Maternal Age EPMR was highest in teenage mothers with 44.8 per 1,000 total births vs. 35.6 per 1,000 total births for the whole study group.

It decreased with maternal age with lowest EPMR in mothers aged >30 years.

(b)- EPMR was highest in primigravidae and para 3 (39.9 and 43.9 per 1,000 total births respectively).

21.Mati, J. K. G., Sinei, S. K. A., Oyieke, J. B., Sekadde-Kigondu, C. G., Thagana, N. G., Njoroge, J. K., Muita, M. N. (1987). Clinical Aspects of Infertility in Kenya: A Comprehensive Evaluation of the Couple. J.Obst. Gyn. East Centre. Afri. 6.61.

They investigated 105 couples (105 females and 105 males). Of these 105 females 8.6% were aged 15 to 19 years old. The commonest cause (etiologic factor in the female) was tubal abnormalities (33.1%) and pelvic adhesions (28.2%).

22. Mati, J. K. G. (1986). Sexually Transmitted Disease (STD) in Adolescents. J.Obst. Gyn. East Centr. Afri. 5:4.

Mainly quote the works of Mulandi, Orwenyo, Nana, etc. It was not an original papers.

-The available evidence suggests that STDs are highly prevalent among adolescents and because of inadequate facilities for diagnosis and treatment especially in the rural areas, reservoirs of infection have developed.

-Prevalence of STD in adolescents

-In a study of 409 rural Kenya women, infection with 1 or more of *C. trachomatis*, *T. Vaginalis*, *N. gonorrhoea*, syphilis, and *candida albicans*, was encountered in 44.1% of women aged 15 to 24 years; which was much higher than in older women (Mulanidi).

-In another study involving urban women (pregnant) *N. gonorrhoea* infection was significantly higher in single women, 11.5% vs. 2.6% in the married; and in women aged 15 to 19 years 11.5% vs. 40% in women aged 20 years or older. The same was found with the other organisms e.g. *C. trachomatis*, (Orweny's study).

-In yet another study at the KNH, screening for syphilis in antenatal patients, showed that 63% of the women with serological evidence of infection were </-25 years; and 32% were </-20 years while only 10% <30years old.

The Problem of STD in Adolescents

-The adolescent is at a special risk of contracting STD infection.

-The adolescent in Africa is at a disadvantage especially in as far as facilities are concerned especially so in the rural areas.

-The adolescent may not present herself for treatment partly because of guilt conscience or fear of victimization.

-Services such as antenatal care, family planning are least utilized by young adolescents.

Prevention of STD in Adolescents

-Acceptance of the fact that STD exists in alarming proportions in adolescents, and that adolescent constitute a special risk group as far as these infections are concerned.

-A need to include information on STD in appropriate educational curricula for adolescents especially where sex education for family life education is taught in schools.

-Perhaps the knowledge that STD may lead to infertility may make the adolescents more concerned about the possibility of contracting the infection and employ appropriate means to avoid it.

23.Mulanidi, T. M. (1985). A study of sexually transmitted diseases and the effects of these on cervical cytology in contraceptors, antenatal and control population groups at a rural area in northern division of Machakos District Kenya. M. Med Thesis University of Nairobi.

409 women were recruited with 308 in the study and 101 Controls of the total, 272 were aged 15 to 19 years and 137 were aged 20 to 24 years.

-75% of the teenagers were single

-infection with >/- 1 of *N. gonorrhoea*, *T.vaginalis*, *t. Pallidum*, *C. albicans*, *C. Trachomatis* was found in 44.1% of women aged 15 to 24 years and 57% of those aged less than 20 years which was much higher than in older women.

The risk factors associated with higher incidence of acquiring STD were:

-young age 15 to 19 years

-low parity or multiparity

-the unmarried status of the patient

-use of the IUCD

24. Muraya, G. N., Mati, J. K. G. (1985). Teenage Pregnancy in Rural Kenya, J. OBST. Gyn. East Centr. Afr. 4:73.

-A study conducted in Machakos District (Katheka, Kathama and Katwanya Divisions).

-211 teenage mothers delivered between October 1981 and December 1983.
(The control group 20-24 years old = 417 mothers)

Results

Age: The youngest mother was 14 years at delivery

21.3% = <- 17 years
40.6% = 18 years
37.9% = 19 years old

Parity

- 73.9% = Nulliparous
- 26.1% = >- para 1

1 patient, a 19 year old, was para 6

In the control group 10.3% were nulliparous with the highest parity being 5 (1.2%)

-The abortion rate in the teenagers was 12.7%
-66.4% of the teenagers became pregnant while in primary school
-47.6% of the teenage mothers got pregnant outside the institution of marriage (only 15.3% of the control were unmarried).

Anaemia

-Teenagers incidence = 1.5% versus 3.8% in the control group.

Syphilis

-It was positive in 1.5% of teenagers versus 2% of the control.

Hypertensive disease

-More common in the teenagers with 2.5% versus 0.5% incidence in the controls.

Delivery

-80% delivered at home
-20% delivered at a hospital

Perinatal Mortality Rate

-47.4 per 1,000 total births teenage mothers
-38.4 per 1,000 total births the control group

25. Muroki, F. K. T. (1987). Age at menarche, prevalence of menstrual pain and attitude to menarche in Luhya school girls in Kakamega District Kenya. M. Med Thesis University of Nairobi.

388 Luhya school girls in Kakamega District, Kenya were interviewed to determine the mean age at menarche.

-The mean age at menarche was to be 14.3 +/- 1.4 years.

-This age at menarche is invariably proportional to the socio-economic status being 13.9 +/- 1.3, 14.4 +/- 1.1 and 14.4 +/- 1.2 years for high, medium and low income groups respectively.

-69.1% of the girls who had reached menarche were possibly ovulating and thus in danger of adolescent pregnancy if exposed to unprotected coitus.

-80.4% of the girls who had reached menarche had prior knowledge about menstruation before this event.

-Information on menstruation and possibly other related sex education issues was mainly left to school personnel, the mothers playing only a minor role in disseminating it.

-97.2% of the girls who had reached menarche had a negative attitude to this event despite the fact that quite a large number (80.4%) had some knowledge about menstruation before menarche suggesting the knowledge was inadequate.

-The age group 10-19 years gives the 99% confidence limits for the age at menarche in this population. Menarche outside this range may be considered abnormal.

26. Ndavi-Muia, P., Mwalali, P. M. Mbugua., S. E., Sekadde-Kigondu, C. B. Mati, J. K. G. (1984). Cervical cytology in a Kenyan Rural Population. J. Obst. Gyn. East Centr. Afr. 4:167.

The study was conducted in Machakos MCH/FP Clinics between October 1981 and May 1984.

1,755 single pap smear were taken. Of these 25.6% were abnormal i.e. class 3 and 4. Only 1 woman aged 15 to 19 years had abnormal pap smear class 3 out of 148 women in the same age group.

20/615 women who had married at between 15 and 19 years of age had pap smear class 3, while 14/649 who had married between 20 and 24 years had pap smear class 3, and 5/73 of those who had married >/- 25 years of age had pap smear class 3. 4/418 of women whose ages of marriage were unknown had pap smear class 3.

27. Ngoka, W.M. , Mati, J. K. G. (1980). Obstetric Aspects of Adolescent Pregnancy. E. Afr. Med J. 57:124.

-A study of 567 primigravida patients under 20 years of age who delivered at Kenyatta National Hospital in 1978 is presented.

-26% of the total were <16 years of age.

-Preterm delivery and low-birth weight babies associated with poor antenatal care and poor education in adolescents was confirmed.

-There is increased perinatal mortality and premature rupture of membranes.

-Pre-eclampsia was not found to be increased in adolescent pregnancy.

-There was an increased risk of anaemia

-The incidence of teenage pregnancy was found to be 11.1%.

28. Njogu, W. (1981). School Girl Pregnancies: A study of a Kenya Girls Boarding School September 1980 February 1981. AMREF, Nairobi.

This is one of the original studies of schoolgirl pregnancy in Kenya, carried out at a time when there was little approval of such investigations, with the result that extension of the work failed to obtain official approval.

Objectives were to investigate:

- Factors leading to increasing incidence of schoolgirl pregnancy
- Psychological, social and economic effects on children and mothers.
- Ways of preventing occurrence and minimizing the adverse consequences for those affected.

A close investigation of a girls secondary school was undertaken with a KAP questionnaire and a follow up to the homes of 17 girls who had dropped out through pregnancy.

The study found that many girls who became pregnant were themselves, daughters of women who had had very early pregnancies. Reproductive knowledge was poor and the curriculum did not enhance it. Biological fathers of the children did not generally accept responsibility (only 4 of the 17 girls investigated eventually married the child's father) and the socio-economic conditions of the girls and their children were very poor.

29. Njoroge, W.M. (1984). Knowledge, attitude, and practice of family planning at the University of Nairobi. M. Med Thesis Universities of Nairobi.

Study among U. O. N. female undergraduates to find out:

- The use and choice of actual contraceptive method
- Reasons for refusal to use other methods
- The degree of knowledge about each contraceptive method
- History of unplanned pregnancies.
- Presence of family planning intentions
- Presence of professional advice and source of knowledge
- Their attitudes towards family planning, abortion and breast feeding.

184 girls were interviewed by means of self-administered questionnaire.

66.4% of them were aged 21 to 24 years.

12.5% of them were married.

There were 48 babies born, 33.3% of them to single mothers, 43.7% of these deliveries were planned while 52% were unplanned.

- There were 5 abortions all of which were induced and all were single girls.
- There were no spontaneous abortions in either group
- The safe period was the most familiar method of contraception followed by the pill.
- Only 22.3% were currently on any form of contraception with the pill, rhythm, and IUCD making 85.4% - mainly obtained at the KNH Family Welfare Clinic and University Health Clinic.
- Those not on any method feared the side effects and preferred abstinence from sex.
- Those who had used a method and stopped did so because of infrequency of sex or because of side effects.
- Though 38% had had sexual intercourse in the preceding month, only 32.8% of them had used any form of contraception.
- 68.5% had had an intention or had intentions for future use of contraception.
- 47.7% gained most of their knowledge on contraception during their university days, mostly from friends.
- The majority said they would have preferred a health course on sexuality, reproduction, contraception and counseling facilities.
- The majority did not know the mode of action of both the oral contraceptive and intrauterine contraceptive devices (IUCD).
- 46.7% said they would prefer to have a male child for a first born. 11.9% a female and 39.7% would not mind either.

30. Oyieke, J. B. O. (1986). Menstrual Regulation in Nairobi between October 1982 and October 1985. E. Afr. Med. J. 63:792

-223 menstrual regulations were done over a 3-year period. The objective of the project was to test its efficiency and to assess its complication rate. It was found to be a simple procedure which could be done on an outpatients or office basis.

-90% of the patients lost \pm 50ml of blood

-None had post-abortal sepsis with abscess formation

-None had uterine perforation

- \pm 90% of the patients in this study had knowledge of a method of contraception at the time of the study.

Age.

\pm 20 years	=	1.8%	(4/223)) 51.1%
21-24 years	=	49.3%	(110/223)	

One of the teenage girls had been raped and conceived as a result.

Parity

0	=	21.5%)	
1	=	30.0%)	= 51.5% (\pm 1 parity)
2	=	42.2%)	
>3	=	6.3%		

Therefore, majority of them were of very low parity and young \pm 25 years.

With the increasing number of family planning clients presenting with failure of a given method, and knowing that when a client is determined not to carry on with a pregnancy she will go to anyone to help her procure an abortion, it is recommended that menstrual regulation be used as a backup facility for those cases of failed contraception.

31. Rogo, K.O., Oniango, R. K., Muruli, L. A. (1987). Menarche in African Secondary Schoolgirls in Kenya. E. Afr. Med. J. 64:511

-843 secondary schoolgirls in selected rural secondary schools in Kenya were interviewed by means of questionnaire.

-Age at interview ranged from 14 20 years (mean 16.3 \pm 2.77).

-Age at menarche ranged from 9 to 16.5 years with mean of 13.9 \pm 2.69.

-Mothers were the source of information in only 26.1% of cases (therefore they played a very minor role). The rest 73.95 obtained the information from friends, teachers/nurses at school, books, relatives, movies/films or nobody (6.6%).

-Average menstrual period = 3.7 days

-Pain was felt on M. P. by 70.4% with 18.6% of them having severe, and 51.8% moderate pains. 29.6% did not experience pains during M. P.

-97.5% felt there was a need to teach FLE in schools while 2.5% felt not, and 54.0% felt it should start around 12 years of age.

-91.1% felt that women rather than men should teach FLE

-68.6% felt boys and girls should be taught together.

32. Sanghvi, H.C.G. (1984). Evaluation of oral contraceptive acceptance and usage at the Family Welfare Centre, Kenyatta National Hospital. J. Obst. Gyn. East Centr.Afr. 3:83.

A one year study January to December 1979 involving 1,165 oral contraceptive acceptors over 4,254 women-months of use is presented.

11% of the oral contraceptive clients were 19 years old or less.

The youngest client was 14 years old. 79.35 were aged between 20 and 30 years and 10.6% were aged over 30 years. 9.8% of all the clients were nulliparous. 25.2% had had one pregnancy. 21.5% were para 2. 13.6% were highly parous. In the group 15 to 19 years, (who formed 10.2%), -3.0% were nulliparous and 5.1% were para 1.

42% of the women were single, 50% were married, 6.6% were divorced/separated and 1.5% were widowed.

33. Sanghvi, H. C. G., Mati, J. K. G., Aggarwal, V. P., Lucas, S. and Corkhill, R. (1983). Nairobi Birth Survey V Outcome of pregnancy in Teenage Mothers in Nairobi Kenya. Obst. Gyn. East Centr.Afr. 2:134.

This was a seven week period study (from 15th June to 4th August 1981) conducted in Nairobi hospitals.

-There were 5,293 singleton deliveries. Of these 981 were in women </- 19 years old giving a rate of 18.6%.

-The youngest mother was 10 years and 2 months old at the time of delivery. She had not had any menstrual period.

-She delivered a 2750 gm female baby by vacuum extraction.

Age and Parity

Most were in their late teens, but substantial proportion were very young indicating that sexual activity is prevalent at this early age. 26% had had one or more previous pregnancies.

Tribe

Teenage pregnancy was found to be more common in the Luo women than among the other Kenyan ethnic groups.

Education

54.85 became pregnant while in primary school

Marital status and contraception

-63.8% were married

-2.2% were using contraceptives.

Antenatal Care

-94.55 had attended ANC

-However, very few booked early. The overall quality of the care provided to teenagers was poor.

-Hypertensive disease in pregnancy was noted in 13.4% of the teenagers versus 10.5% of the general population and there was an increased incidence of pre-eclampsia.

Labour and Delivery

-89.8% had spontaneous vaginal delivery

-2.3% had operative vaginal delivery

-4.7% had cesarean section (lower than in the general population (6.6%))

-The duration of labour in teenage primigravidae was just the same as for the older primigravida.

-There was a high incidence of foetal distress (7.5%).

Foetal Outcome

-Low birth weight babies = 14.3% versus 7.6% in the general population.

-Prematurity incidence was 23.9%

-Foetal outcome was also poorer with a mortality rate of 45 per 1,000 to birth.

34. Sinei, S. K. A., Mati, J. K. G., Mungai, J. Mailu, C. K., Mbugua, S. E., Mulandi, T. N., Ndavi-Muia, P. H. (1984). Prevalence of Anaemia of Pregnancy and role of Malaria in its aetiology in Rural Kenya. J. Obst. Gyn. East Centr. Afr. 3:19.

The study was conducted in Machakos District, Kangundo area between October 1981 and July 1984. 1,629 pregnant women were studied (in a rural community).

- 7.4% of them had anaemia. 288 out of 1,629 women were aged less than 20 years. Of those with low haemoglobin (Anaemia) (Hb <9.0 gm per dl)
- of those with low haemoglobin (Anaemia) (Hb <9.0 gm/dl)
- There was none less than 15 years old
- 8 were aged 15 to 24 years
- 38 were aged 25 to 29 years
- 19 were aged 30 to 34 years
- 23 were aged <-/ 35 years.

Discussion

The younger pregnant women were less likely to have anaemia than the older age groups.

35. Too, E. C. (1988). Socio-economic Consequences of Teenage Pregnancy at KNH. Dissertation for B. A. Social Work University of Nairobi.

Total number = 37 women aged 14 to 19 years

- 14 15 years = 21.6%
- 16 17 years = 21.6%
- 18 19 years = 56.8%

Age at first birth

- 14 years = 5
- 15 years = 10
- 16 years = 5
- 17 years = 7
- 18 years = 4
- 19 years = 6

-Most of these girls got pregnant while still in school and 56.8% of them were in primary schools. While 91.9% got pregnant while in school/college.

-81.8% of the 22 girls who got pregnant while in school had to leave school to look after their babies. Others were rejected by the school, had no funds (school fees), or refused to go back though accepted for fear of ridicule by teachers and friends.

-Parents are unwillingly to take responsibility of their children's children. 84% of the girls were dependent on their parents or relatives for their livelihood. Of the other 16%, 13.5% earned between 100 - 1,000 Kshs per month, therefore, still dependent on their parents/relatives for the necessities.

-Parents of these girls 63% fathers and 88% of mothers had primary education and below, therefore, their income is poor 65% of the parents were peasant farmers. Therefore, teenage pregnancy in such a family is a burden to the family as well as the girl. The children are disadvantaged because they lack proper care. Society attitude towards pregnant adolescents:

- 24.0% - were ridiculed
- 21.6% - were violently treated and ridiculed
- 18.9% - were violently treated (especially fathers).
- 10.0% - were rejected
 - were isolated
 - were sent away from home

-95% of the girls did not want to get pregnant and were very unhappy when they realized they were.

65% - had thought of abortion

16% - were confused

11% - feared their parents

8% - did not mind being pregnant.

Reasons given by the girls for getting pregnant.

(i) Ignorance of their own sexuality

(ii) Conviction by the boyfriends that nothing would go wrong

(iii) Others thought it was safe as their friends who were sexually active had not been pregnant.

Generally the adolescents view pregnancy at their age as highly problematic and undesirable.

No. 36 to 53 are papers which were presented at a workshop held at Kwale 1986 and were contained in Adolescent Fertility Proceedings of workshop held at Kwale, Coast Province Kenya KMA, MOH, DFH/GTZ Edited by K. O. Rogo.

36. Kigundu, J. G. (1986). Foreword.

-Most of the adolescent pregnancies take place outside marriage thus causing a high desire for abortion in order to avoid shame, and for fear of missing out on opportunities.

-For the African women, induced abortion is 900 times as risky when compared to the women in USA.

-Of the deaths due to abortion at the KNH (1974-1983) 67.4% were amongst females below 25 years of age, 78.9% of whom had evidence of interference. Below 19 years (adolescents) comprised 24.2% of the abortion deaths, 95.7% of which were induced with a 100% sepsis.

-Need for parents to provide their children with socio-sexual education.

-Provide FLE to young people from age 8 years

-Serious consideration to the existing abortion law in Kenya.

37. Migot-Adholla, S. E. The art of condemning the victims. Some reflections on adolescents Fertility in Kenya. (pp. 12-30).

-Paper based on the authors years of critical observation as a practicing sociologist.

-That teenage sexuality and its consequences e.g. unwanted pregnancies and the associated health and psycho-social sequelae have a social origin.

-The duration of adolescence has increasingly become longer.

-Traditional social institutions that controlled sexual behaviour have become ineffective since the extended family has tended to disintegrate yet no institutions have emerged to provide information and services relevant to the needs of the Kenyan youth today.

Adolescent fertility as a social problem

-Adolescents make up about 20% of the national population and it is the fastest growing population segment.

-It is also the most fertile group, and a good proportion of them are sexually active.

-The problem of sexually transmitted disease with the attendant sequelae.

-Unwanted pregnancy with the associated complications.

-Abortions often illegally procured.

A well-conceived sexual education programme incorporating moral, psycho-social and biological aspects of human sexuality, including socially-acceptable and effective clinical and contraceptive services for sexually active adolescents is urgently required.

Socialization and the Regulations of Sexual behaviour

-The longer period of adolescence because of early maturation and longer stay in school in search of education, and the high rate of unemployment lead to increased socio-economic dependence for longer periods. At the same time these adolescents are sexually active in this period.

Needs for information and clinical services

-Need for sex education parents at home and teachers in schools

-Provision of clinical services for the sexually active adolescents

-Need for Government support, and political good-will, on these:-

38. Ndeti, D.M. (1986). The adolescent in his socio-physiological context in a changing Kenyan society. Pp.43-49

The adolescent in his social context

-The immediate social context is the nuclear family, which is different from what it used to be before.

-The wider social context outside the family exposes the adolescent to other various influences.

General principles

-The behaviour of an adolescent is greatly influenced by that of the other members of the family. Therefore a problem in the family system may manifest in many ways ("scape-goating") e.g. adolescent sexuality and pregnancy.

Boundaries and systems within family circles

Affairs within a family are conducted within the framework of certain principles that govern the social psychological interactions within their families referred to as the "systems, boundaries and roles principles".

The nuclear family circle

-Each component of the family e.g. father, mother and children

-Each member to be treated as an individual in his/her own right

-Respect for each other and hierarchical recognition is important

-The need for togetherness

-The nuclear family is the most fundamental and most critical of all the social and psychological contexts from which the adolescent will qualify.

An adolescent who qualifies from the nuclear family with proper social and emotional preparation, provided by the constant interaction by the emotionally and socially mature adults. (parents) will be better prepared than one who comes from a nuclear family that is itself emotionally disadvantaged.

Outside the nuclear family

-Adolescents compare and contrast notes with other people

-Trials and experimentation including of sex with the false notion that "after all so many are doing it", is common.

Guiding the adolescents

-Parents need to talk to their children, impart basic facts about life, and listen to them and their opinion/views on certain matters.

-Adolescents should be accepted and listened to freely by the parents.

39. Njau, P. W. (1986). Social and cultural factors associated with pregnancy among unmarried teenage girls. Pp.33-42.

Factor

-Pregnancy among the unmarried teenage girls is a multifaceted problem affecting many girls worldwide. May arise from sexual behaviour because of:

- Desire to quench their sexual arousal
- Individual factors
- Social factors lack of love at home
- Economic (sugar daddies)
- Symbolic interaction interpersonal experiences and cognitive social learning of erotic meaning.
- Breakdown in traditional kinship and extended family systems
- Lack of proper education on sexual matters from proper sources
- Lack of/or non-use of contraceptives.

*N.B. The problem of teenage pregnancy is a function of many social cultural, economic, and psychological factors.

Recommendations

-Further research to establish exact causative relationship between the factors and teenage pregnancy in Kenya is required.

40. Kigundu, J.G. (1986). The organization of family planning services for Adolescents in Kenya. pp.53-60.

The family planning policy in Kenya targets the population for f/p services as "married couples in the reproductive age (15 to 49 years)"

The single adolescent girl has been neglected, ignored and not recognized as a can be a mother.

They are denied contraceptives in the belief that by so doing they would be encouraged to indulge in immorality.

The girl who seeks contraceptive is crying for help and deserves the most appropriate service.

Services

-Counseling very important as far as this group is concerned

F/P Methods

-Abstinence Not very practical in the light of the amount of erotic literature, visual materials, and the example of adults.

-Natural - too strict adherence and observation to be practical for the adolescent.

-Condoms the best of them.

Service outlets

- Clinics, hospitals, private medical practitioners
- Pharmacies
- Shops, kiosks, reception desks for condoms, foaming tablets
- Community based distribution
- Expanding the catchment area
- Social marketing
- Vending machines
- Youth movements

41. Sanghvi, H.C.G. (1986). Medical consequences of Adolescent Fertility in Kenya. Pp.61-65.

Demographic Consequences

- 8% of girls aged 15-19 years were currently pregnant according to the 1979 report of KCPS.
- In 1960 the fertility rates for 15-19 year olds was 141 per 1,000
- In 1979 it was 168 per 1,000.
- It is estimated that 201,600 births will occur to teenage mothers in the year 1986 in Kenya.

Health Consequences

-There has been an increased prevalence of STDs among the sexually active adolescents. Problems related to these STDs include:-

- Adolescents do not recognize the disease or its symptoms
- They hesitate to seek help
- They are embarrassed to go to hospital
- Seek treatment from unqualified persons.

-The long term complications include:

- Infertility
- Transmission to foetus/newborn e.g. syphilis, gonorrhoea
- Lead to foetal/neonatal deaths
- Urethral stricture in the male.

-Cervical neoplasia

-Intercourse at early age and having multiple sexual partners have been shown to be related to cancer of the cervix.

-Unwanted pregnancy

-Abortions (especially illegal) have been shown to be common among the adolescent. These lead to sepsis, haemorrhage, injuries, deaths, or subsequent infertility.

-Pregnancy problems

-Problems associated with these include

- Pre-eclampsia
- Intrauterine foetal growth retardation
- Vasico-vaginal fistula due to obstructed labour
- High incidence of foetal distress, prolonged labour, and anaemia

The young mother's child

- High incidence of low birth weight (x2 that in older mothers)
- High incidence of prematurity
- High perinatal mortality
- High infant mortality rate

Conclusion

- Need for action in all possible fronts either providing health education, FLE, sex education
- Legalization of abortion services
- Family planning services

42. Oluande K'Oduol G. A. (1986). Adolescent Pregnancy in Kenya: A study of adolescent mothers at Pumwani Maternity Hospital Nairobi. Pp.66-71 on Adolescent Fertility proceedings of Kwale workshop ed. K. Rogo

This was a study on mothers aged between 14 and 20 years who delivered at the Pumwani Maternity Hospital, between 1st January and 28 February 1986, based on hospital records and files.

-There were 910 mothers aged 14-20 years out of a total of 3,151 mothers. Therefore, giving adolescent rate of 28.9%.

-Of the 910 mothers 653 (71.8%) were married and 257 (28.1%) were unmarried.

-Parity 57.1% were primigravidas

-26.0% were para 1 (gravida 2)

-11.7% were para 2

-3.6% were para 3

-Previous abortions

-There was a 3.4% abortion rate prior to the current pregnancy

-Complications

-Pre-eclampsia in 13.4% of the mothers

-Caesarean section rate = in 4.7%

-Breech delivery = in 3.0%

-Residence

-Majority reside in the low income residential areas of Nairobi.

43. Mumia, J. A. (1986). Adolescent Fertility at the Eldoret District Hospital. Its effects on Uasin Gishu District Demography. Pp.73-81.

-A study of adolescent fertility in the obstetric and gynecological unit of Eldoret District Hospital between 2.1.1986 30.6.1986, using admission records.

Results

-There were 307 adolescents out of a total delivery admission of 1,658 18.52%.

-Majority (161/307) were aged 17 to 19 years

-48.2% were married.

-Prematurity rate was 11.7%

-Perinatal mortality was 35 per 1,000 total births

-14% had previous pregnancy

-The modes of delivery were:

-C/S = 6.2%

-SVD = 91.6%

-Breech = 0.3%

-Complications

-Pre-eclampsia - 3.6%

-Puerperal - 1.6%

-Abortions - 47.9%

44. Obwaka, J. M. L. (1986). Adolescent pregnancies, Kisii District Hospital pp.82-82.

-Deliveries between January and June 1986, were obtained from hospital records.

-A total of 1,521 mothers delivered. Of these, 479 were aged <20 years were giving a 31.55 incidence and most of them were single schoolgirls.

-Out of the 479 adolescents

-98 (20.55) were married

-381 (79.5%) were single

-103 (21.5%) had antenatal care, while 376 (78.5%) did not.

-Obstetric complications

Anaemia was seen in 38.4% of adolescents vs.23.1% in those >/- 20 years.

Hypertension in 8.1% vs. 5.4% in those >/-20 years

Prolonged labour in 38.2% vs. 10.2% in those >/-20 years

Caesarean section in 28% vs. 13.1% in those >/- 20 years

Maternal mortality rate was 2% vs. 3% in those >/- 20 years.

-In the abortion wards

-32.2% of the admission were teenagers

-and the abortion related deaths were nearly x 3 higher in this group as compared to the total population.

45. Achapa, C. (1986). Data on Adolescent Fertility at the Kericho District Hospital. Adolescent Fertility pp.84-87.

-Between January and June 1986 a total of 2,024 mothers delivered at the Kericho District Hospital

-Of these 523 (26%) were adolescents (19 years old)

-The majority of the adolescents were married with

-54% of those 16 years

-71% of those 17-19 years old.

Parity

-80-87% of all the adolescents were primigravida

-10-18% were para 1

-1-4% was para 2

-only 1% was para 3

Delivery

-about 80% had spontaneous vaginal delivery

-and 10% had caesarian section

Birth weight

-about 90% of them had babies weighing more than 2500 gm (good weight).

Contraception

-of the 280 new clients seen at the FP clinic of the hospital, 29 (10%) were adolescents.

-Of the 29 adolescents

-13 (45%) were single while 16 (55%) were married

2 of the single contraceptors were aged 16 years

of the 29 adolescent contraceptors

-16 (55%) were using the oral contraceptives

-13 (45%) were using the IUCD.

46. Njuki, S. K. Abortion Is it a problem at Nakuru General Hospital? Pp.88-90.

This paper consists of analysis of the last 100 abortion cases treated at the hospital.

An analysis of all acute gynecological admissions between 17.6.86 and 17.7.86.

An analysis of all theatre records between May and July 1986 to determine the percentage of theatre time taken up by abortion related operations.

Results

Abortions

-64% of the women aged 14 to 20 years according to his experience, induced abortions are by far more common than spontaneous.

-About 50% of all the obstetric and gynecological operations were evacuations. (49.5%) and out of the 4 theatres in the hospital 1 is allocated exclusively for evacuations.

-Out of 168 acute gynecological admissions (June July 1986) 62.5% were abortions related.

47. Shah, U. (1986). Hindu views on adolescent fertility pp.93-95

Hinduism as a way of life has six principles namely Satya (truth), Reta (order), Prarthna (prayers), Tapah (austerities), Diksha (consecration), and Karmakanda (rites and rituals).

A woman in Hindu has guidelines as to how she should behave in each of the various roles (as a daughter, sister, wife, mother, grandmother, sister in law, and even a neighbour), by keeping the six principles in mind.

-There is plenty of family interactions in Hindu families, through which young people are taught.

-Impressing on them the value of chastity at marriage

-Fidelity

-Good education

-Knowledge and information is passed on through generations

-Anybody going astray be it promiscuity, infidelity, pregnancy outside wedlock is frowned upon and a stigma attached to the whole family too. This fear tend to control these excesses in Hinduism

-Cases of adolescent sexuality and pregnancy do exist but they are few, and often swept under the carpet (hidden).

48. Wanjohi, R. (1986). Views of the Catholic Church Youth and Family Life Education pp.94-104

-The Kenya Catholic Secretariat Newsletter of December 1985 stated the position and stand of the Catholic Church in Kenya on the use of the contraceptives by the youth. It condemned any indiscriminate distribution of contraceptives to the youth since "such indiscriminate distribution of contraceptives is tantamount to promoting promiscuity amongst them, and is an abuse and degradation of sexual faculties given to them by God".

"It would inevitably lead to the undermining of true love among them and the happy family life that should grow from it, and would create a climate where venereal diseases of all kinds would flourish in our society".

-The Catholic Church agrees that:

-There is need to give them proper and correct education on fertility, but teaching that condones or justifies fornication or adultery under the pretext of sexual intercourse among the youth is bad. "it is an affront to the dignity of our youth and to the respect that is due to them"

The author did a study in 3 secondary schools in Central Kenya involving boys aged 13 to 23 and from form I to form VI, using a questionnaire.

His observations were that:

-The boys play a vital role in creating justifying reasons for indulging in premarital unions.

-The lack of proper and correct pre- and post-pubertal sex education takes them view penile erection and nocturnal emission as male diseases necessarily cured by premarital coitus.

-There is failure of parents in imparting to their children the essentials of fertility awareness.

-The biology lessons in school seem not to transcend the examination syllabus, hence leaving these boys in a vacuum to be filled by their peers' hearsay and rationalized dynamics.

-The period of sexual intercourse was concentrated from standard VI to form II.

49. Kabira, D. (1986). Protestant Churches Medical Association Youth Officer. Information and education towards responsible adulthood. Pp.105-107.

PCMA has a department which deals with the problems of adolescent fertility.

-The Youth Information and Education Towards Responsible Adulthood is a Christian programme whose objective is to help the school adolescents solve the problems of their irresponsible sexual behaviour thereby contribute to a decrease in adolescent pregnancies.

-Concerned that:

-16 to 20% of all the deliveries in the PCMA hospitals are of schoolgirls under the age of 19 years

-in a study involving adolescents the following observations were made, that:

-50% of them had boy/girl friends

-50% of them would wish to marry between 13 to 21 years.

-Most of adolescents are not aware of the consequences of boy/girl sexual experimentation

-There is a high increase of premarital pregnancies especially among the schoolgirls.

Programme activities of PCMA's YTETRA include:

-Curriculum development

-Recruitment and training

-Of youth educators (from institutions to which they return)

-Supervision and motivation

-Of the educators by the programme staff

-Research and evaluation

PCMA's Views of Adolescent Fertility

-Contraceptives should not be given to adolescents

50. Roubani. 91986). Adolescent Fertility in Kenya: a Bahai view pp.108-109

Bahai is strongly against premarital sex and pregnancy

Recommends teaching of the youth to fear God and avoid that which is evil, and that wedlock is the only place where procreation is allowed.

51. Islamic Views on Adolescent Fertility pp.110-116

Adolescent fertility can be checked and controlled by:

-Self control or deliberate abstinence from marriage or indulgence in sexual activity till after age 24 years.

By the use of contraceptives

-It is the man who always takes the lead in indulgence in sex and corrupts the woman by giving fake promises and hopes, because his part in the process is just for pleasure.

-There is need to teach the children, the youths and the adolescents the purpose of our animal or biological desires

-It has been observed that girls from good moral environs and who are engaged in some noble pursuit in life like the acquisition of some academic qualifications can practice self control even to the age of 25 to 30 years.

-Therefore, the same can be employed to help most youths.

-Islamic religion does not recommend the use of contraceptives because

-It may lead to reduction in population growth ultimately

-May lead to increased illicit relations and therefore venereal diseases

-Weakens the bonds of matrimonial relationships.

52. Gakunga, M. N. (1986). Health education in primary, secondary and teacher education curriculum in Kenya. Pp.119-120.

-Talks of the various levels and forms of health education provided by the Ministry of Education to school girls and boys.

Most of it is about plants, animals, biology of human beings. There is nothing specifically on sex education or family life education.

53. Ooko-Ombaka, O. (1986). The Laws Governing Fertility in Kenya. Pp.127-137.

Legal regimes relating to fertility

Contraception

-There are no direct statutory provisions on contraception.

Abortion

-This explicitly governed by Kenyan Law; and is punishable.

-Sessional paper No.4 of 1984 states that "induced abortion as a method of family planning is contrary to the wishes of the Government of Kenya."

The Law as it relates to Adolescents

There is nothing specifically aimed at adolescents as far as fertility is concerned in the Kenya's Laws.

PART C: IDENTIFICATION OF AREAS NEEDING FURTHER RESEARCH

PREAMBLE

One of the major goals of the CSA among other things, was to carry out research in the area of adolescent fertility with the aim of finding ways in which the problems of adolescent fertility could be minimized in the long run. In order to do this it was important to first compile and analyze existing research materials. In this way, it would be possible to understand what had already been done in this area as well as identify the areas where new and/or further research was required. Following the completion of the compilation of existing research, the following areas were identified as needing further research.

1. SOCIAL-ANTHROPOLOGICAL ISSUES IN ADOLESCENT FERTILITY

(a) Further data is required in order to determine the magnitude, incidence and prevalence of adolescent pregnancies, abortions and sexually transmitted diseases. At present there is specific national data on the issue of adolescent fertility. For us to be able to influence the policy makers, it is imperative that such data are made available.

(b) The determinants of adolescent sexuality and fertility

There is need to do research in order to determine:

(i) The socio-economic background of the sexually active adolescents and their parents.

(ii) The socio-demographic background of the sexually active adolescents and their parents in terms of:

- Their age
- Geographic region
- Residential status (urban/rural)
- Educational level
- Religious affiliation
- Tribal origins/ethnicity

(iii) The psychological factors in the sexually active adolescents

- psychiatric problems
- problems of specified groups (e.g. orphans, the physically and mentally handicapped, the homeless, prisoners etc).
- family harmony/disharmony
- peer group pressures

(iv) The cultural background of the sexually active adolescents

(v) The perceptions and aspirations of the sexually active adolescents presenting with sexually transmitted diseases, pregnancy, and abortions

(vi) The social changes in the society and how they relate to adolescent sexuality and fertility.

(c) The knowledge, attitude and behaviour related to adolescent sexuality and contraception

These studies should include:

- The adolescents themselves, both males and females
- Their parents
- The health workers
- The church leaders
- The teachers
- The policy makers

(d) Studies on the variations of adolescent sexual behaviour within the country

There is need to establish the

- Regional variations, the influence of residential area (urban and rural)
- Seasonal variations e.g. school holidays, festival periods, e.g. Christmas etc.
- Age group variations
- Variations among the various socio-economic groups
- Cultural variations
- Inter-school variations
- Religious groups variations

(e) Studies on family life education in order to determine

- Whether it is being provided
- What is the content and what should be the content
- Who are the providers and when it is provided and to whom
- How it is provided (languages, media, etc).

If it is not being offered at all, it is necessary to determine:

- The need for it
- The contents
- To whom it should be provided, where, when by whom and how.

(f) The consequences of adolescent sexuality and pregnancy

These will include:

- Social
- Psychological
- Economic (to the girl, boy, family and community)

These may be done during pregnancy and after termination of the pregnancy. The increasing prevalence of illegal abortions is one completely unresearched and important part of this field, which needs further research.

(g) Studies designed to look at the interventional measures available

There is need to conduct studies to determine

(i) Whether interventional measures are already designed for the girls who are sexually active, pregnant or presenting with abortions or sexually transmitted diseases. It is necessary to accurately find out to whom such measures are directed or aimed at.

(ii) If there are no such measures, then studies can be designed to establish:

- The need for such interventional strategies
- The types of interventional measures required .e.g.

I. Counseling before, during and after pregnancy

II. Rehabilitative measures after abortion or delivery

III. Adoption of the baby

IV. Care services antenatal, special clinics for the adolescents, social support services e.g. day care centres

V. Provision of family planning services before and after abortion or pregnancy

-To determine to whom interventional measures should be targeted the adolescents, parents, offsprings.

(iii) Evaluation of interventional strategies after a period of time. The studies can be designed to evaluate:

- The acceptability of the interventional measures
- The impact of these interventions on the adolescents sexual behaviour, pregnancy and abortions
- The need, if any, to modify them.

2. MEDICAL ISSUES IN ADOLESCENT FERTILITY

The studies can be cross-sectional or longitudinal. They can be institutional or community based. The latter are more representative, and should be carried out whenever it is desirable and possible.

(a) Adolescent sexuality and related problems

e.g. - sexually transmitted diseases including AIDS
Cancer of cervix.

(b) Adolescent pregnancy

(i) Research should be conducted to obtain demographic indices e.g.

- Age structure
- Prevalence rates
- Incidence

(ii) Determination of the socio-economic factors related to adolescent pregnancy, e.g.

- Educational level
- Religious affiliation
- Marital status of the adolescent
- Residence
- Occupation etc.

(iii) Prospective studies during pregnancy to determine

The pregnancy outcome in terms of

- Abortion
- Preterm births
- Term delivery
- Postdatism

Maternal complications e.g. anaemia, hypertension, eclampsia, foetal and neonatal complications.

Maternal behaviour related to

- Antenatal care
- Delivery
- Postpartum period
- Foetal loss abortion, neonatal death, etc.

(iv) KAP studies on adolescent pregnancy targeted at:

- The adolescents themselves
- The parents
- The community
- Health providers
- Church leaders. Etc.
- Teachers
- Peers

(c) Sexually transmitted diseases

(i) Screening for STDs in

- Institutional adolescents
- Those in the community

(ii) KAP surveys on sexually transmitted diseases targeted mainly at the adolescents themselves.

(d) Contraceptive practices

(i) KAP surveys for

- The adolescents themselves
- The community
- The political leaders
- Religious leaders
- Teachers
- Health providers

(ii) Follow-up studies to determine:

- The contraceptive acceptance rates
- The patterns of use
- The factors affecting acceptance and use

(iii) Research on the appropriateness of particular methods to adolescent

(iv) Research on the effective delivery methods of contraceptives

(v) Counseling for contraceptive use.

(e) Psycho-social problems

Studies should be designed to determine problems related to adolescent pregnancy, e.g.

- Abortion
- Chronic maternal morbidity
- Term delivery
- Abandonment of babies
- Child abuse
- Preterm delivery
- Loss of education, employment and economic prospects (on the part of the adolescent)
- Loss of parental support
- Social stigma

(f) Health service delivery

There is need to do research to find out:

- Availability
- Acceptability
- Accessibility
- Appropriateness of health services

(i) Do an assessment of the available services for the adolescents

(ii) Do KAP surveys on service providers and the users of the services

(iii) Evaluation of intervention measures.

There will at the end of all that be a need to do an evaluation of :

- educational programmes
- other services e.g. family planning services and antenatal care for adolescents.

3. POLICY ISSUES IN ADOLESCENT FERTILITY

(a) There is need to review policy issues that are available in the area of adolescent fertility

(b) The issue of adolescent fertility is so important that there is need for CSA to work on a policy document which will form a reference point against all activities related to adolescent fertility in Kenya. The policy document should address the following topics:

- (i) Definition of Adolescents
- (ii) Adolescent contraception
- (iii) Sexually Transmitted Diseases
- (iv) Family Life Information, Education and Counseling
- (v) Social and Medical Care for adolescent mothers and their children.

(c) There is need to formulate a working definition of adolescents. This will help in standardizing the study populations in various studies to be conducted.

At the moment various age groups have been used by various researchers.

Such a definition should include all the various aspects of adolescence/adolescents i.e. medical, psychological, sociological, and legal.

There is also need to have policy guidelines as far as

- Adolescent sexuality
- Adolescent pregnancy
- School opportunities for the pregnant adolescent
- The care of the offspring
- Provision of sex education to the adolescents both in and out of school
- Rehabilitation of the pregnant adolescents
- Treatment of adolescents, e.g. For STDs and abortions.



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