Adolescent Fertility in Sierra Leone

Benjamin Gyepti-Garbrah
ADOLESCENT FERTILITY IN SIERRA LEONE

By

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PREFACE

When The Pathfinder Fund began to consider the subject of adolescent fertility in Sub-Sahara Africa some years ago, the desire to do programmes was overridden by the questions: What do we know about the situation? What descriptive information exists that defines all of this? What are the problems, if they exist, that deserve solution? It was then found that what does exist to describe the circumstances was literally scattered to the four winds, in a report here, an article there, a survey here, a speech there. Nothing had been done to put the information in one piece of work. That provided the raison d'être for preparing what you will find in these pages. A grant from the Andrew W. Mellon Foundation made it possible.

This volume, and its companions, are attempts to describe what is known about adolescent fertility in four distinct Sub-Sahara African countries -- Nigeria, Kenya, Liberia and Sierra Leone. These publications are intended to be used as "resource books" or as "fact books" for programmers and policymakers, both within and outside the respective countries. They attempt to gather together all of the information available on the subject to date, but they do not pretend to be entirely exhaustive.

The presentation is straightforward, it describes and summarizes the health, social and demographic context in which adolescent fertility occurs in each of these countries as well as what the implications are. All of this raises a number of questions and policy considerations, each set out more specifically in the Executive Summary. This volume does not presume to resolve these questions. That is a task that is purposely left to those who will study and discuss the "facts" discussed in this text. Our hope is that Adolescent Fertility in Sierra Leone will begin, or at least contribute to, the discussion of this important subject. If that is done our purpose in undertaking this two-and-one-half year process, more than capably done by Benjamin Gyepi-Garbrah, will be well served. The challenge is to begin the search for answers to the types of questions that arise out of this series.

John M. Paxman

The Pathfinder Fund
Chestnut Hill, Massachusetts
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Finally, this volume could not have been turned from the original drafts into this printed form without the diligence, persistence and hard work of Laura Glynn, Caroline Clayton and Linda McDermott of the Pathfinder Fund.

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INTRODUCTORY BACKGROUND

Objectives

The objective of this paper is to utilize secondary sources of information from censuses, surveys, research and administrative publications to describe some aspects of adolescent fertility in Sierra Leone. In order to provide a broader perspective to the subject it shall also cover the socioeconomic characteristics and reproductive health behavior of adolescents as well as the demographic, social and medical implications of adolescent fertility. It concludes with a summary of the key points of the paper. Policy recommendations will be left out. Rather, these will be left to policymakers and population program developers in the country.

Background

Research interest in adolescent fertility is a novelty throughout the world but more so in the developing countries. It was roughly in the early 1970s that serious thought was actually given to intensive and extensive studies of adolescents (Carolina Population Center, 1976 and 1978). Since then interest in the subject has risen throughout the world. This is evidenced by the huge increase in the number of courses, seminars, workshops, studies, newsletters, magazines and of national and international conferences (see references in Population Reports, 1976, 1979, 1980, 1982, 1983 and 1984 a and b; WHO, 1977; Bogue, 1977; Parkes, et al., 1978; Maine, 1983; and Senderowitz and Paxman, 1985).

This surge of interest grew out of initial recognition that boys and girls, during the period of transition from childhood to adulthood, exhibit distinct physiological and psychological features which are neither characteristics of adulthood nor of childhood and thus constitute a separate group of individuals with their own special needs and problems (WHO 1977). Attention to the subject of adolescent reproductive behavior was given an added boost in developed countries by findings that the number of teenage pregnancies were increasing and, in some cases, that the birth rates among the youngest teenagers were also. These, in turn, were sensationalized in the popular press and described in some quarters as an "epidemic" of teenage pregnancies (Cutright, 1972; Ventura, 1977; Parkes, et al., 1978; Jekel and Klerman, 1979; Holtrop, 1979; Hollingsworth and Kreutner, 1980; Smith and Humford, 1980).

In many developing countries interest in adolescent fertility is growing. This is due mainly to the general worldwide findings, reaching across many cultures and countries, that early childbearing is strongly associated with increased pregnancy complications, higher maternal and infant mortality, lower social and occupational mobility for both mother and child and with a high rate of population growth (Sa, F.T., 1975; Population Reports, 1976, 1984a; Engstrom, 1978; Sai, F., 1978; Fortney, et al., 1979; and Senderowitz and Paxman, 1985). In Africa, studies in many countries, including Nigeria, Kenya, Sierra Leone, Tanzania, Zambia and Zaire, have also confirmed the hypothesis that early pregnancy is strongly associated with high rates of abortion, still births, infant
and maternal mortality and morbidity, school drop-out among female adolescents and the attendant loss of self-esteem and confidence (Akingba, 1974; Chibungo, 1974; Faulis, 1974; Arkutu, 1978; Gachui, 1980; Njogu, 1980; Aggarwal and Mati, 1980; Sierra Leone MOH/WHO, 1980; Stiles, 1982; and Mott, 1982).

In Sierra Leone, although no consistently thorough-going work has been done on the issue of adolescent fertility, concern for the special needs of adolescents has, since 1981, found expression in the work of the National Association of Adolescent Fertility Awareness. The need to pay closer attention to adolescent fertility was also underscored in Stiles' study of abortion among patients at Freetown's Princess Christian Maternity Hospital (PCMH) in which she found that "young women under age 20 had substantially more risk of poor pregnancy outcomes, maternal mortality, and neonatal mortality" than the older age groups. She also observed that "adolescent sexual activity was greater than acknowledged but unsupported by evidence" (Stiles, 1982). In an earlier "fairly representative" study made of the country by the Ministry of Health and the World Health Organization (MOH/WHO), it was also found that adolescents during pregnancy and puerperium have a higher incidence of complications, abortions, genital tract and urinary infections than the older adult population (Sierra Leone MOH/WHO, 1980).

But who are these adolescents and what type of special problems do they have to warrant any special recognition and treatment? Before attempting to answer these questions, it would be useful to define what is meant by adolescence.

Definition of Adolescence

There is no universally accepted definition of adolescence. Most societies accept the biological beginning of adolescence as the time when puberty starts. But the time when adolescence ends and adult status commences is an issue of social orientation that differs widely among cultures. In many societies social maturity, or adulthood status, is achieved when one marries. Since the age at marriage is low in these societies, the period of adolescence, at least for females, tends to be brief, often following fast on the beginning of puberty. This pattern is typical in the rural areas of developing countries, where the transition to adulthood is very short (Chui, 1978). The prevailing norm in industrialized societies is to extend the period of transition toward adulthood, usually because of the amount of time taken for schooling and training that develop professional and vocational skills. There are, obviously, patterns that fall in between these extremes.

These biological and social definitions, as useful as they are, fail to consider the legal aspects of the issue. Legally, the minimum age one attains the age of majority or becomes an adult varies. The law therefore:

... attempts, to a certain degree, to take the process of individual development into account, but it also seeks uniformity and certainty and so historically has rather arbitrarily selected the magic age at which one reaches legal
'adulthood' for some or all purposes. This is commonly referred to as the age of majority. At common law, the age of majority - the age at which individuals are competent to handle their own affairs - was fixed at 21, although now the trend is to lower it somewhat, usually to 18. Many civil law countries have followed a similar rule. So the legal definition of adulthood has tended to operate independently of other social and biological factors. This can be seen in the fact that one may be an adolescent but legally adult or a youth but legally a minor, or under-age (Paxman, 1984).

Social scientists and medical researchers, however, have found it useful when trying to establish age limits, to take as broad a view as possible, even to the extent of distinguishing the earlier phase of adolescence from the latter, e.g. 10-14 years, 15-19 years. It was proposed nearly two decades ago by a WHO Expert Committee that the age limits of 10-20 years be used to describe, chronologically, adolescence.

The concept of youth is overlapping, consisting of late adolescence and early adulthood. Most refer to youth as the age group between 15-24, while distinguishing between early (15-19) and late (20-24) phases. "Youth" as such is also a transitional stage in human development, though it shades across the line between adolescence and adulthood. For the purpose of this paper "adolescence" is used interchangeably with "youth" and encompasses the age group 15-24.

Like most West African countries, traditional Sierra Leonean society has an institutional structure through which boys and girls between ages 15 and 18 were initiated into adulthood (Kaplan, et al., 1976). This process is managed by the so-called secret societies, the most important and widespread of which are the Poro for males and Sande for females. There are other secret societies. These are more specialized in function and restricted in membership. The "secrecy" relates mainly to three practices: the practice of barring non-members from meetings and rituals; the practice of keeping the lore and practice of the organizations a secret from members of the other sex; and the practice of preventing the lower ranking members of the society from acquiring the esoteric knowledge of higher ranking members, who hold their judicial and political meetings in isolation.

Both Poro and Sande secret societies prepare boys and girls for their future adult roles. Without initiation they cannot achieve adult status and initiation was a prerequisite for marriage. During their training boys, for instance,

learn the special Poro passwords, signs and symbols, history, and traditional rules of conduct ("poro" actually means "laws of ancestors")... To symbolize that they have been "swallowed" by the Poro "spirit" and reborn, the boys are given new names that they use for the rest of their lives. To gauge their self control, discipline, obedience toward elders and to help them cope more adequately with the vicissitudes of life, the boys are forced to undergo severe endurance tests that help to impress upon them the sacredness
of their duty to Poro and the rule that they must never divulge Poro secrets, under penalty of death. The common experience creates a strong feeling of solidarity among initiates that continues throughout life (Kaplan, et al., 1976).

The female counterpart of Poro, as known among the Mende tribe, is the Sande. Its equivalent is known as Bundu among the Temne and Bondo among the Sherbo. It operated on the same lines as the Poro. The officials, the most senior, are very knowledgeable in traditional practice and beliefs and are the moral leaders of the society. Each member of the highest council has a specific function. One of them, the "Digba Sowa", is generally a midwife in the village. Kaplan reports that in the early 1940's at the suggestion of Sir Milton Margai, a physician and later the first Prime Minister of the country, the Sande introduced simple anatomy and physiology and modern methods of nursing, first aid and sanitation as part of the initiation curriculum.

Like most traditional institutions, the secret societies are changing, largely as a result of the many changes taking place in Sierra Leone. For example, the initiation period has been reduced from months to a few weeks, and the age at initiation has also fallen from between 15 and 18 years down to between 9 and 12 years. Changes in the political structure, as well as the increased importance of formal education and employment, have weakened their influence. Even so, the influence of the secret societies is still substantial. Kaplan and others make reference to a study done in the early 1960s in Moyamba. It found that 70% of the Mende ethnic group in the town had been initiated, that initiation rites were held regularly and that the majority still considered initiation a prerequisite for marriage. The secret societies continue to provide the best channel for interethnic communications and in areas of mixed populations, membership in a secret society appears to be more important than ethnic affiliation (Kaplan, et al., 1976).

Country Profile

The Republic of Sierra Leone covers a land area of 71,740 square kilometers. It lies on the coast of West Africa is bounded on the west by the Atlantic Ocean and inland by the Republics of Guinea and Liberia. The country achieved its political independence from Britain in April 1961 and became an independent state within the British Commonwealth. On April 1971 the country became a Republic, with a President as Head of State.

Sierra Leone has a tropical climate with constant high temperatures ranging from an average of 72°F (22°C) at night to 92°F (33°C) during the day. Humidity is usually high throughout the year. The original vegetation was mainly tropical rain forest, with moist savanna woodland covering the northeastern part of the country. The original vegetation has, however, been altered by human activities. The primary rain forest now exists only in a few places, mainly in forest reserve areas and along main rivers and their tributaries. The rest of the original rain forest is now covered with bush and secondary forest.
Economy

Agriculture dominates the Sierra Leonean economy in terms of both its job creation and its contribution to the Gross Domestic Product (GDP). Until rapid development of mineral resources in the 1930s, agricultural products accounted for most of the country's exports. The proportion of the labor force engaged in agriculture continues to decline (78% in 1960 to 65% in 1980). Agriculture contributed about 30% to the GDP during the 1970-1981 period (World Bank, 1983 and 1984). In the 1950s, mining replaced agriculture as the country's major foreign exchange earner. Since then diamonds have replaced iron ore as the most important mineral in terms of value. The main exports, in addition to diamonds and iron ore, include bauxite, coffee, cocoa and kernel. Consumer goods, capital goods, semi-finished goods and crude oil are Sierra Leone's principal imports.

In spite of satisfactory economic growth immediately after independence, the country since the 1970s has continued to experience serious economic problems. Between 1963 and 1971 the country recorded a 4.3% annual economic growth. This growth slowed down during the 1970s, largely as a result of a progressive decline in mineral output (UNFPA Files, 1981). In his Overall Review of the Economy of Sierra Leone, Narapalasingam attributed these problems to the following structural features:

- the smallness of the domestic market;
- the high dependence on imports - total imports as a percentage of GDP averaged around 31 per cent during the period 1974/75-1978/79, while the ratio of total exports to GDP was less than 24 per cent during the same period;
- the high concentration of exports on three products - diamonds, coffee and cocoa. In 1978 the export earnings from these three products contributed nearly 90 per cent of the total earnings from all exports, with 67 per cent accruing solely from diamonds;
- the dependence of almost two-thirds of the population on subsistence agriculture;
- the low productivity in agriculture due to seasonal shortages of labour, lack of inputs and capital;
- the dependence on imported fuel for transportation and generation of electricity: oil deposits having not, so far, been discovered;
- the spatial duality of the economy accounting for sharp disparities between the Western Area and the rest of the country in: urbanisation, the sectoral distribution of the labour force, the levels of per capita income and the supply of economic and social services;
- the inadequacy of the roads and communication links for integrating different parts of the country;
- the low rate of domestic savings of the country;

Notwithstanding energetic efforts of the Government in implementing the 1974/75 - 1978/79 National Development Plan, the plan period witnessed very poor economic performance and growth. The main factors contributing to this situation were, a sharp decline in the production of minerals, a steep rise in the international prices of crude oil and manufactured products, and an inadequate growth in other commodity producing sectors of the economy to compensate for the loss in mineral production (UNFPA Files, 1981).

Because of these problems, the gross domestic investment declined at an annual rate of 1.2% between 1970 and 1981. The GDP grew at an annual rate of 1.8% during the period, which was not quite the equivalent of the annual rate of population growth (World Bank, 1983). Income per capita in 1982 stood at US$390, an increase of US$70 from the 1981 figure. The 1982 figure is slightly more than the average estimate of US$280 for what the World Bank classifies as low income countries and represents an average annual growth rate of only 0.9% from 1960 (World Bank, 1983 and 1984).

Prospects for substantial economic growth to the year 2000 are not very promising. Per capita gross domestic product is expected to grow slowly up to 1985 because of slow economic growth and the accelerating growth in population. According to an UNFPA report,

if the needed structural changes are accomplished successfully during this period, and adequate investments are made, especially in the commodity producing sectors, the prospect for the remaining 15 years is much better, with per capita gross domestic product projected to increase at 2-3 percent annum (UNFPA Files, 1981).

Population

Before 1974, inaccuracies in the degree of coverage of earlier censuses and lack of complete and reliable nationwide statistics made it difficult to provide an acceptable estimate of the true size of Sierra Leone's population.

In 1901 the whole country was covered in a "census" for the first time but the results (particularly of the Protectorate mainland) were very suspect. The 1948 population count, which gave a total population of 1,860,000, was also not acceptable either. On the basis of subsequent estimates (based on the number of taxpayers and an assumed number of persons per taxpayer ranging from 3.4 to 7.0 per district) it
was estimated that the 1963 census should be about 2.5 million. The actual census count of 2,180,355 was, therefore, received with disappointment and criticism.

Fears were expressed that the figure would reduce the country's international prestige and prejudice her chances to attract foreign financial aid. The figures also brought out certain internal sensitivities with respect to the uneven populations of the electoral constituencies (which were found to range from under 3,000 to 80,000 with an average of 33,500) and the relative sizes of the two largest ethnic groups - the Mende and Temne.

The Government, however, accepted the 1963 census results but with an undertaking to hold another census two years later (Clark, 1968). These factors probably laid the foundation of caution with which future governments approached population issues. The next census was conducted eleven years later on December 8, 1974. The total recorded population was 2.74 million.

These questions about the reliability and accuracy of population censuses in the country have made it difficult to establish a plausible and an acceptable rate of Sierra Leone's population growth. For instance, the annual growth rates for the 1901-1948 periods range from over 3% for the 1901-1911 period to about 0.3% for the 1931-1948 period. The unreliability of the 1948 "census" also prevented the establishment of an acceptable growth rate during the 1948-1963 period. The official estimates and projections (based on its high variant projections prepared by the National Population Commission (NPC)) put Sierra Leone's annual growth rates for the 1974-1984 and 1984-1989 periods at 2.01% and 2.21% respectively.* [Annex 1]

Notwithstanding the census inaccuracies and deficiencies in the country's vital statistics (U.N. 1982), it is fairly plausible to state that the Sierra Leone population is increasing and the annual rate of increase has accelerated since early 1960s. The estimates indicate that this acceleration will continue through 1994-99 period when it will reach 2.4% per annum. [Annex 1] And underlying these changes are the levels and trends of the country's fertility and mortality.

The high cultural value placed on procreation, the early marriage and the low contraceptive use rates have for decades sustained a high fertility level. The country's crude birth rate (CBR) per 1000 population, according the United Nations, stood around 48 in the early 1960s. In the early 1980s, according the Government estimates, the CBR was still around 48. This placed Sierra Leone in the group of countries with a moderately high fertility rate. In early 1980s, the fertility level translated to a total fertility rate of 6.1.

* The high variant projections are recommended by the NPC because "there has been no significant demographic effects due to low level of family planning and population inertia."
The most important factor in Sierra Leone's growth rate is not fertility but rather the modest decline in mortality since the early 1960s (Annex 1). The United Nations medium variant estimates show that between 1950 and 1955, Sierra Leone's crude death rate (CDR) stood at 36 per 1000. By the early 1960s it remained almost unchanged at 35 per 1000. By the early 1980s official country estimates show that the CDR declined to 31 per thousand. The main reasons accounting for the fall in the death rate, like those of other developing countries, include improvements in living conditions, sanitation and nutrition, expansion educational and of health services and the attendant rise in the use of modern medical technology and therapeutics.

Sierra Leone is densely populated by African standards. In 1984 its population density of 46 per square kilometer was thrice Africa's 16 and twice West Africa's 23 (ECA, 1980). [Annex 1]

Sierra Leone's population is largely indigenous. In 1963 Sierra Leoneans comprised 97.3% of the total population of 2,180,355, and can be grouped into about 18 ethnic groups (Kaplan, 1976). The major ethnic groups (with over 15,000 population) in 1963 were Mende, Temne, Limba, Kono, Koranko, Sherbo, Susu, Fullah, Lokko, Madingo, Kissi, Creole, and Yalunka. The non-nationals were mainly Africans from the West African region. Of the small non-African population, the predominant group was from Lebanon; followed by United Kingdom and USA. Since independence, the non-national population has grown modestly from 59,442 or 2.7% of the total population in 1963 to 79,414 or 2.9% of the country's total population of 2,735,159 in 1974 (OkoYE, 1980). In light of the official policy of restricting influx of foreign immigration, net immigration may continue to be negligible and hence will have little impact on the country's population growth and structure (Nortman and Fisher, 1982).

Sierra Leone's population is predominantly rural, although the "urban" population is increasing very fast. This urban growth is due principally to natural increase (fertility) and migration, but has also been affected by changes in the status and boundaries of localities. Between 1963 and 1974 the censuses show that the proportion of the population residing in localities with 5,000 or more people rose from 13% to 21%. This is equivalent to an annual growth of 5.4% for such localities. Greater Freetown, which includes the nation's capital, dominates the "urban" population. The population increased from 162,000 in 1963 to 276,000 in 1974. This is about one-half of all the population residing in towns. The estimated "urban" population in 1985 by the United Nations stands at 28%. [Annex 1]

The country's overall demographic dynamics indicate that it will experience population growth during the next two decades. The National Population Commission projections indicate that the country's 1974 total census population of 2.7 million will, by the year 2000, reach 4.8 million. The negative socioeconomic implications of this increase in

* Though there is no official definition of urban area in Sierra Leone we shall for convenience refer to localities with 5000 or more inhabitants as towns or urban areas.
population have been documented elsewhere and will not be discussed here (See Dow, 1972; Forde 1972; Harvey 1972; Sierra Leone Government, 1974; and Dow and Benjamin, 1975; and UNFPA Files, 1981).

**Government Policy on Population**

Though the country does not have an official, clearly defined comprehensive policy on population, the Government is moving steadily toward it. For a long time the Government had no program on fertility.

Since the early 1970s, though Government involvement and participation in family planning and population activities has increased. The then Chief Medical Officer, Marcella Davies, the technical head of the Ministry of Health, said in 1975 that the government supported family planning activities and that she was in favor of "active participation of qualified nurses and midwives in family planning" (Milas and Corvalan, 1975). Next, the Government in 1978, with support from the UNFPA and ILO, established a population section in the Ministry of Development and Economic Planning and promised financial support for population and family planning activities in the 1974/75-1978/79 National Development Plan. Since 1979 the Government has been supporting the Planned Parenthood Association of Sierra Leone (PPASL) through yearly grants and provision of duty-free facilities that allow the Association to import equipment and contraceptive supplies free of import duties.

By 1982 the Government considered the rate of natural increase to be satisfactory. Although it believes that overall economic and social development will contribute most effectively to the solution of associated problems, it is giving careful attention to means of expansion of family health services and to the most appropriate means of including family planning guidance within them. The Government has, since 1978, allowed the Planned Parenthood Association to provide services. However, at present, it still gives highest priority among matters of population concern to the reduction of high levels of morbidity and mortality and the improvement of the spatial distribution of the population. A policy to decrease immigration is also in effect (UNFPA, 1982).

The present Government's position on fertility is based on the belief that the decision to adopt modern contraception is something private, the decisions about which should be left to individuals but that family services should be made available to those who decide to use them. For this reason voluntary agencies have been allowed to provide family planning services without any political constraints. Contraceptives are sold through a variety of commercial channels, including pharmacies. Moreover, the Government supports through its health care system some family planning activities. In the words of John:
Although Government has no fertility policy, family planning in the form of child spacing and fertility advisory services are provided at some Maternal and Child Health (M.C.H.) Centres at the Ministry of Health (John, 1984).

On November 2, 1982, the Government launched the National Population Commission. The Commission has the following tasks:

a) Formulating a population policy
b) Promoting and fostering an integrated approach to family planning
c) Promoting and encouraging the integration of various aspects of family planning and development, and
d) Co-ordinating, promoting and integrating population activities into the planning cycle in Sierra Leone (John, 1984).

Membership of the Commission is broadly based and drawn from all sectoral Ministries, the Judiciary, the University, and representatives from the medical profession, religious organizations, and voluntary organizations. The underlying objective, according to John, Secretary of the Commission, is to "reflect ethical, cultural, social, economic, political and religious interests, which have to be duly considered especially in matters of policies that touch on the livelihood of people" (John, 1984).

Adolescent-Oriented Population Activities

In addition to the Government's increasing interest and input, a number of local organizations did and still receive external financial support for population activities. Annex 3 provides a summary of those activities which were operational during the 1976-83 period. It is evident from this summary that:

1) There are very few projects which offer contraceptive or counselling services to adolescents (in fact the policy is not to give contraceptives to those under 18 years of age);

2) Apart from the population education programs, which cater almost exclusively to the adolescents, the rest cater to women without any differentiation by age. Adolescents as such are not singled out for any special treatment;

3) Sex education or education on human reproductive health is rarely provided;

4) Almost all the programs are on population and family life education;
Coverage is virtually restricted to the school population with very limited attention being paid to the out of school adolescents.

Compared to other African countries, Sierra Leone has a fairly well developed population and family life education program for its adolescent population. In fact, by mid-1982 the country had "the only established national program in Africa south of the Sahara, although a program is beginning in Somalia and some planning is underway elsewhere" (Population Reports, 1982). The Institute of Education of the University of Sierra Leone presently directs the program, which was initiated in 1973 by the Sierra Leone Home Economics Association (SLHEA). The program now has a Population Education Advisory Committee, comprising representatives from SLHEA, PPASL, Fourah Bay College, Njala University College, Milton Margai Teacher's College, Central Bureau of Statistics, Ministry of Education, Ministry of Development and Institute of Education.

The program’s ultimate goal is to "create widespread awareness of the implications and consequences of population growth on the socioeconomic growth of the country." The hope is that students will "eventually be able to make informed and rational decisions on matters relating to population, like when to marry, how many wives to marry, when to have children, size of family and to make positive moves towards ensuring an improved quality of life for their family, community and nation" (Population Reports, 1982).

The program's objectives have been greatly enhanced by the cooperation it has and continues to receive from the Education Ministry and by the latter's agreement in 1977 to introduce population education into the new secondary-level Social Studies curriculum of the first three forms of the five-year secondary school system. The content of this new course includes population dynamics, population and family life, population and ecology. The program is extremely popular with the secondary schools and its expansion has been hampered only by the inability to provide enough teaching and learning materials for the schools who want it. By 1981 the initial 14 pilot schools had increased to 44 -- 30% of the 148 recognized secondary schools in the country. In the 1981-82 academic year a new course, Social Studies/Population Education was started at Milton Margai Teachers' College to prepare students to effectively teach the subject in secondary schools. The overall plan of incorporating population education into the school curriculum has encountered a number of problems, not the least of which is that a small proportion of the school-age population is in school. In 1981 only 39% of the children of primary school age, 12% of the children of secondary school age were enrolled in the formal school system, and 1% of those aged 20-24 were enrolled in higher education (World Bank, 1984).

Other Fertility-Related Practices

A majority of mothers in Sierra Leone breastfeed for a relatively long time. The Ministry of Health/WHO 1973-75 study found that recent mothers tended to breastfeed for about 12 months compared with an
average of 9 months for Kenya (1977-78). This long period of breastfeeding children (12-17 months old) was confirmed in a more recent government nutrition survey which found that 95% of these children in the rural areas, 82% in urban areas and 79% in Freetown were still breastfeeding (Sierra Leone Government, 1978). The effect of this practice in depressing fertility is counterbalanced by many other factors that are conducive to sustaining, or even increasing, the current levels of fertility. These include their low contraceptive use rates, a predominance of rural population with tendencies for large families, and limited educational and economic opportunities for women. The increasing youthfulness of the population also provides momentum for further population growth. The censuses show that between 1963 and 1974 the proportion of the population aged under 15 increased from 36.7% to 40.6%. By 1979 this proportion had increased further to 41.9% and 42.3% in 1984 (National Population Commission, 1984). The momentum generated from this age structure combined with the persistent high fertility and declining death rate are such that even if fertility were to drop to replacement level the population will continue to grow for some time.

Factors associated with further population growth will continue to dominate the dynamics of the Sierra Leone's population for years to come. The country still has one of the highest mortality rates in the world. In 1982 Sierra Leone and Guinea recorded the highest infant mortality rates (190 infant deaths per 1000 births) in Africa. Great potential for further decline therefore exists in the country. The Government policy, which concentrates on reducing morbidity and mortality without any commensurate program to reduce fertility may therefore actually result in rates of growth higher than projected by the Government and the United Nations. The possibilities for an increase in fertility patterns (as experienced in Kenya since the 1960s) cannot be discounted. The anticipated improvements in nutrition, sanitary and medical conditions and the attendant reduction in mortality call for a comprehensive program which not only provides family planning services and contraceptives to all fecund female and males irrespective of marital status but makes room for fertility depressant policies like improvements in the status of females, increased female education, increased access of females to non-domestic employment and the adoption of other policies and programs associated with the acquisition of small family norms. In all these programs, the special needs of adolescents should not be overlooked.
SOCIOECONOMIC CHARACTERISTICS OF ADOLESCENTS

Percentage of the Population

Adolescents have one thing in common with the total Sierra Leonean population: their numbers are growing rapidly. The number of adolescents, aged 15-24, at the time of the 1974 census stood at 442,564. According to National Population Commission projections, the adolescent population in 1984 stood at 602,000. These projections indicate that the adolescent population will increase to 877,000 by 1999. The equivalent percentage increase during the 1984-1999 period is 46%. This rate exceeds that of the total population during the period under review. This is reflected in the estimated percentage of adolescents in the total population. This has increased steadily from 16.18% (1974) to 18.2% (1984) and is expected to reach 18.4% (1999).

The adolescents also differ from the rest of the population in many respects. Sierra Leonean adolescents are more educated and profess more and increasing affiliation to Moslem religion than the adult population. As a result of increases in their school enrollment ratios since early 1960s, they continue to record lower rates of economic activity (UN, 1980; ILO, 1970). The MOH/WHO study (1973-75) found, somewhat unexpectedly, that the number of adolescent females inhabiting the localities, including urban and rural areas, was substantially higher than that for adolescent males. Sex ratios were 59.2 for those aged 15-19 and 65.4 for those aged 20-24, and 69.5 and 68.4 respectively in urban areas. In the rural areas the sex ratios were 50.6 for adolescents aged 15-19 and 62.8 for those aged 20-24. These results merit further study because the figures are thought to be affected by biases in age-misreporting and underreporting in certain age groups.

Educational Attainment

Data from the early 1960s indicate that, although the level of education in the country is generally low, males have consistently maintained a higher level of education attainment than females in all age groups. In 1963, the literacy rate of adolescent males aged 15-19 and 20-24 were 23% and 12% respectively compared with the females literacy rate of 7% and 3% in the same age groups.

Post-independence expansion in education opportunities has resulted in increases in the literacy rate and enrollment ratios among adolescents. As Table 1 indicates, 9% of those aged 12-18 were enrolled in school in 1970 but nearly three times as many males as females aged 12-18 were in school. The proportion of adolescents aged 12-18 enrolled in school increased during the 1970-74 period to 11%, and the gap between male and female enrollment ratios showed signs of closing. Very few persons make it to the third level of education. By 1974, less than one percent of the age group, but predominantly males, was enrolled in this level. The general increase in educational attainment among adolescents was also confirmed in the MOH/WHO study for the 1974-75 period. The study found that in the Western Area of the country 28% and 21% of females aged 15-19 and 20-24 respectively have had some education. Among males the respective figures were 50% and 29%. 
TABLE 1: School Enrollment Ratios by Educational Level, Age and Sex, 1970 and 1974

<table>
<thead>
<tr>
<th>Level</th>
<th>Age Group</th>
<th>Both Sexes</th>
<th>Male/Female</th>
<th>Both Sexes</th>
<th>Male/Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5-11</td>
<td>34</td>
<td>41</td>
<td>27</td>
<td>35</td>
</tr>
<tr>
<td>2</td>
<td>12-18</td>
<td>9</td>
<td>13</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>20-24</td>
<td>0.50</td>
<td>0.83</td>
<td>0.16</td>
<td>0.65</td>
</tr>
</tbody>
</table>


Marriage

Marriage is almost universal in Sierra Leone. Early marriage continues to be the norm. In a 1969-70 study only 6% of all females aged over 14 years remained unmarried (Dow and Benjamin, 1975). The mean age at marriage was only 16 years. This ranged from 15 years in the rural areas to 18 years for Freetown and 17 years for the other urban areas.

Among female adolescents, Dow and Benjamin found that in 1970 only 16% of those aged 15-19 have never been married. That means that by age 19 over 84% of the teenage females had been married. There was a very big difference, though, between urban and rural residents of villages with under 1,000 population. In these villages females married at very early ages. In 1969-70 only 5% of females aged 15-19 remained unmarried. This is to be compared with the results of the MOH/WHO 1973-75 study in the more urbanized Western area. The study found that 28% of female adolescents aged 15-19 were unmarried compared with the 5% which Dow and Benjamin found in the country within this age group. Among the males, as usual, the age at first marriage was found to be higher than that of the females. Only 6% of males aged 15-19 had ever been married; by age 24 only 36% had been married. The study concluded that "nuptiality patterns prevailing in the Western area show two important features, that (a) women marry at very early age -- marriage is not quite universal, especially among males -- and that (b) males marry at considerably later ages than do females, and a relatively large proportion of them remain single even at the late adulthood. This helps to facilitate polygyny."
Polygyny is very common in the country. In 1970 58% of females aged 15-24 were in polygynous unions. Almost all the marriages are customary unions. These have no legal age limit, are recognized by the society and are governed by customary rules. A very tiny proportion of all marriages are civil (or legal) unions. These civil unions have legal age limit. In the 1974 WHO/MOH study it was found that in the Western area only an insignificant number of females lived in consensual unions. Most of such unions were probably reported as single or living in customary unions.

TABLE 2: Percent Distribution of Adolescent Females by Age and Marital Status, Western Area, 1974-75.

<table>
<thead>
<tr>
<th>Age</th>
<th>Single</th>
<th>Consensual or Visiting Unions</th>
<th>Customary or Formal Marriage</th>
<th>Separated or Divorced</th>
<th>Widowed</th>
<th>Total % (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-19</td>
<td>27.8</td>
<td>2.3</td>
<td>69.6</td>
<td>-</td>
<td>0.3</td>
<td>100(700)</td>
</tr>
<tr>
<td>20-24</td>
<td>13.5</td>
<td>4.6</td>
<td>81.9</td>
<td>0.6</td>
<td>0.4</td>
<td>100(695)</td>
</tr>
</tbody>
</table>


Religion

The population of Sierra Leone is predominantly Moslem. The proportion of Moslems in the population is increasing faster than that of Protestants or Catholics. In the 1969-70 survey 76% of the population were Moslems compared with 17% Protestants and 6% Catholics.

The increased popularity of Islam is mirrored among the adolescent population. In 1969-70 80% and 76% of females aged 15-19 and 20-29 respectively were Moslems. [Table 3] These percentages among adolescents differ only modestly from the average for females aged 15-49. Protestants are the next largest group, comprising 17% of the total female population aged 15-49. They are followed by Catholics with 6% of this population. The proportion of Protestants, however, seems to be gradually declining in importance among adolescents.
TABLE 3: Percent Distribution of Females by Age and Religious Affiliation, 1969-70.

<table>
<thead>
<tr>
<th>AGE</th>
<th>MOSLEM</th>
<th>PROTESTANT</th>
<th>CATHOLIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-19</td>
<td>79.5</td>
<td>13.7</td>
<td>6.8</td>
</tr>
<tr>
<td>20-29</td>
<td>76.4</td>
<td>16.5</td>
<td>7.1</td>
</tr>
<tr>
<td>15-49</td>
<td>76.2</td>
<td>17.4</td>
<td>6.4</td>
</tr>
</tbody>
</table>


Economic Activity

Activity rates for the overall population are generally low. Males generally have higher economic activity rates than females and this pattern is expected to continue in all the age groups.

Among the adolescent population, those aged 20-24 have higher activity rates than those aged 15-19. Increased school enrollment ratios among the teenaged adolescents explain some of this differential. More male adolescents were found in the labor force than their female counterparts. This stems from the traditional practice of females concentrating on domestic activities which are not classified as formal labor sector jobs. In the light of the present low school enrollment ratios among the teenaged adolescents the potential for further reduction in their activity rates is very great. The next two decades may therefore witness increased declines in adolescent economic activity rates. This is reflected in the ILO projections which show that the adolescent activity rates will fall through the year 2000. [See Table 4] The direct consequence of this is further increase in the country's dependency ratio.

<table>
<thead>
<tr>
<th>Age</th>
<th>Sex</th>
<th>1980</th>
<th>1985</th>
<th>1990</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-19</td>
<td>M</td>
<td>53.4</td>
<td>50.0</td>
<td>46.5</td>
<td>39.3</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>31.7</td>
<td>29.2</td>
<td>26.8</td>
<td>23.2</td>
</tr>
<tr>
<td>20-24</td>
<td>M</td>
<td>84.8</td>
<td>83.8</td>
<td>82.7</td>
<td>80.5</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>43.3</td>
<td>42.7</td>
<td>42.1</td>
<td>42.5</td>
</tr>
</tbody>
</table>

REPRODUCTIVE HEALTH BEHAVIOR

Introduction

In Sierra Leone, adolescents constitute a very important component of the country’s overall fertility, principally due to their numbers and high fertility rate. The 1974 population census shows that female adolescents aged 15-24 comprise 36% of the women in the reproductive age group 15-49. Their numbers are increasing faster than for those of the ages 25-49. The National Population Commission projections indicate that the adolescent females in reproductive ages increased to 39.5% in 1984 and will continue rising through the year 1999, when 40.4% of females in the childbearing age group will be adolescents.

Sierra Leone's overall fertility level may not be among the highest in Africa but its adolescent fertility rates, as Table 5 below indicates, are among Africa's highest. In a 1973 study by Blacker, Dow and Makannah, reported by the U.S. Bureau of the Census, the fertility rates for females aged 15-19 and 20-24 were placed at 212 and 279 per 1000 females. Contemporary estimates do not exist.

The contribution of adolescents to the country's overall fertility is substantial. Teenage adolescents, alone, in the early 1970s contributed 17% to Sierra Leone's total fertility. During the same period all adolescents aged 15-24 accounted for 39% of the country's overall fertility.

Reliable data on contemporary fertility trends is lacking but indications are that the general level of fertility will remain high due mainly to very low utilization of family planning. According to the National Population Commission estimates, the crude birth rate will decline only slightly through the year 1990. It is likely that, with continuing increases in school enrollment and associated increases in age at marriage, adolescents will have a role to play in this modest decline, though this forecast needs to be tempered with guarded optimism.

Adolescent Sexuality

Premarital sex and pregnancy was never extolled in the traditional Sierra Leonean society. Pregnancy before marriage was thought to violate strong cultural and traditional norms. The society indirectly prevented this, and the associated social opprobrium and embarrassment, by encouraging very early marriages, at least for females, at or around the age of puberty. Fertility, as well as expressions of sexuality, were overwhelmingly marital. But now patterns are changing and adolescents are concerned about their premarital sexuality. Stiles hints at some of the concerns when she observes that the most frequently asked schoolgirl question "next to how not to become pregnant, was whether the 'grannys' of the traditional women's society would be able to tell if they had had premarital sexual relations when their time came for presentation within the women's society". Implicit in all this is the fact that many adolescents are premaritally sexually active and they are concerned about the consequences, social and others.
TABLE 5: Total Fertility Rate, Adolescent Fertility Rate Per 1000 and Adolescent Contribution to Total Fertility Rate, Sierra Leone and Selected African Countries, 1961-1982

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>Total Fertility Rate</th>
<th>Fertility Rate 15-19</th>
<th>20-24</th>
<th>Contribution (%) to Total Fertility Rate 15-24</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sierra Leone</td>
<td>1973</td>
<td>6.2</td>
<td>212</td>
<td>279</td>
<td>39.4</td>
</tr>
<tr>
<td>Burundi</td>
<td>1971</td>
<td>6.1</td>
<td>51</td>
<td>252</td>
<td>24.7</td>
</tr>
<tr>
<td>Chad</td>
<td>1964</td>
<td>5.4</td>
<td>171</td>
<td>282</td>
<td>42.0</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>1968-71</td>
<td>5.8</td>
<td>163</td>
<td>287</td>
<td>39.1</td>
</tr>
<tr>
<td>Gabon</td>
<td>1960-61</td>
<td>4.1</td>
<td>171</td>
<td>190</td>
<td>43.5</td>
</tr>
<tr>
<td>Ghana</td>
<td>1979-80</td>
<td>6.5</td>
<td>136</td>
<td>255</td>
<td>30.2</td>
</tr>
<tr>
<td>Kenya</td>
<td>1977-78</td>
<td>8.0</td>
<td>168</td>
<td>343</td>
<td>31.9</td>
</tr>
<tr>
<td>Mozambique</td>
<td>1970</td>
<td>5.8</td>
<td>96</td>
<td>248</td>
<td>29.9</td>
</tr>
<tr>
<td>Nigeria</td>
<td>1981-82</td>
<td>5.7</td>
<td>127</td>
<td>256</td>
<td>34.8</td>
</tr>
<tr>
<td>Senegal</td>
<td>1978</td>
<td>7.1</td>
<td>197</td>
<td>305</td>
<td>35.4</td>
</tr>
<tr>
<td>Zambia</td>
<td>1974</td>
<td>6.7</td>
<td>137</td>
<td>143</td>
<td>21.1</td>
</tr>
</tbody>
</table>


The present generation of adolescents have other reasons to prevent early and premarital conception, if not for avoiding sexual activity. Since the early 1970s the main criteria for acquiring higher social status and prestige have slowly changed from lineage membership and seniority in age to those of education and occupation, at least in the urban areas where education and vocational skills are highly valued. Interrupting, or, for that matter, abandoning, formal education jeopardizes one's future social and economic prospects, at least for the growing percentage of those who have access to schooling. Schoolgirl pregnancy is thought to be a major cause for dropping out of school.

In circumstances such as these there is every reason for sexually active adolescents to seek out family planning counseling and services. Unfortunately, at the moment, such services are not readily available for those adolescents who may require them. The Government does not run family planning clinics per se. That task has, since 1978, been left to the Planned Parenthood Federation of Sierra Leone, though its activities reach a small proportion of the total population at risk. Moreover, contraception is restricted at clinics to women over 18 years, though oral contraceptives can be acquired over the counter at pharmacies, at least in urban areas.

Contraception

The use of contraception in the country is generally low. In 1969-70 Dow and Benjamin found that only 6% of females aged 15-49 had ever used contraception and out of these the majority (66%) used traditional methods of contraception. The utilization of modern means of family planning is extremely low.

There are, however, differences in the patterns of contraceptive use that can be attributed to socioeconomic characteristics and to place of residence. The 1969-70 study found that the proportion of females aged 15-49 who have ever practiced family planning ranged from only 4% in the villages and 12% in the towns to 18% in Freetown. As Table 6 indicates, the use of modern contraception and approval of family planning also differ. Approval rates for family planning and modern contraception rates are higher among the urban residents than for those who live in the rural areas. For instance, 65% of female town residents approved of the concept of family planning but in the rural areas where the majority of the population live, only 10% did so.

Dow and Benjamin did not disaggregate their data by age to allow an examination of use rates among adolescents. Stiles, however, found that the modern contraceptive use rates among adolescents, who had induced abortion at PCNH in 1981, were higher than those reported for urban females aged 15-49 in 1969-70. Stiles also observed that the previous modern contraceptive use rates among those aged under 20 and 20-24 were 30% and 34%. Orals were the most popular method used.

Pregnancy Termination

Abortion in Sierra Leone is permitted only "when the life or physical or mental health of the mother is in danger." Despite this,
TABLE 6: Contraceptive Use and Approval of Family Planning of Women Aged 15-49 by Residence in Sierra Leone, 1969-1970

<table>
<thead>
<tr>
<th></th>
<th>Freetown</th>
<th>Towns</th>
<th>Villages</th>
<th>Total Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent who have ever practiced family planning</td>
<td>18.3</td>
<td>11.6</td>
<td>3.7</td>
<td>5.9</td>
</tr>
<tr>
<td>Methods Use: Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Pill</td>
<td>21.2</td>
<td>13.4</td>
<td>6.0</td>
<td>11.0</td>
</tr>
<tr>
<td>IUD</td>
<td>20.5</td>
<td>8.3</td>
<td>7.8</td>
<td>10.0</td>
</tr>
<tr>
<td>Medical Abortion</td>
<td>9.4</td>
<td>4.8</td>
<td>1.3</td>
<td>3.8</td>
</tr>
<tr>
<td>Condom</td>
<td>5.9</td>
<td>4.2</td>
<td>1.1</td>
<td>3.0</td>
</tr>
<tr>
<td>Traditional Method</td>
<td>29.0</td>
<td>62.6</td>
<td>80.9</td>
<td>66.2</td>
</tr>
<tr>
<td>Mean Length (months) of Breast-Feeding of Youngest Child</td>
<td>15.9</td>
<td>16.5</td>
<td>19.3</td>
<td>18.6</td>
</tr>
<tr>
<td>Percent (%) Approving Family Planning</td>
<td>64.9</td>
<td>64.7</td>
<td>10.0</td>
<td>22.6</td>
</tr>
</tbody>
</table>


Abortion practice, especially in cases of unwanted pregnancy, is believed to be on the increase, particularly among unmarried adolescents.

Like most parts of the world where abortion is largely illegal, hard evidence concerning the practice is difficult to obtain (Akinla, 1970; Ndeti, 1977). Most of the practice is at the fringes of the law. Available data for Sierra Leone, however, show that the incidence of abortion among adolescents is high. In the MOH/WHO study, adolescents aged 15-19 and 20-24 accounted for 23% and 21% respectively of all abortions. In a more detailed study of abortion at Princess Christian Maternity Hospital (PCMH) the country's largest maternity hospital, Stiles confirmed that abortions were prevalent among adolescents.*

* It is a sample population of 5547 patients "drawn from women who used the services of PCMH for delivery, or who were treated for spontaneous or induced abortion from November 1980 to September 1981" (Stiles, 1982).
### TABLE 7: Percentage of Women by Age According to Maternity and Pregnancy Outcomes

<table>
<thead>
<tr>
<th>Age</th>
<th>Number</th>
<th>Percentage of Total</th>
<th>Age at 1st Marriage</th>
<th>Normal Delivery</th>
<th>Caesarean Section</th>
<th>Neonatal Mortality</th>
<th>Maternal Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 15</td>
<td>23</td>
<td>0.47</td>
<td>10.0</td>
<td>56.5</td>
<td>8.6</td>
<td>4.3</td>
<td>4.3</td>
</tr>
<tr>
<td>15-17</td>
<td>912</td>
<td>18.6</td>
<td>75.0</td>
<td>64.7</td>
<td>1.5</td>
<td>5.0</td>
<td>1.2</td>
</tr>
<tr>
<td>18-19</td>
<td>806</td>
<td>16.5</td>
<td>9.1</td>
<td>70.5</td>
<td>1.2</td>
<td>2.0</td>
<td>1.0</td>
</tr>
<tr>
<td>20-24</td>
<td>1441</td>
<td>29.5</td>
<td>5.3</td>
<td>70.6</td>
<td>1.9</td>
<td>3.0</td>
<td>0.4</td>
</tr>
<tr>
<td>25+</td>
<td>1715</td>
<td>35.0</td>
<td>0.8</td>
<td>72.4</td>
<td>2.7</td>
<td>4.0</td>
<td>0.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>4897</td>
<td>100.0</td>
<td>100.0</td>
<td>68.0</td>
<td>2.1</td>
<td>3.6</td>
<td>0.8</td>
</tr>
</tbody>
</table>

**Mean Totals** 23.4 years 16.6 years

* Refers to the number of women who died
** Total refers to number or percentage of entire category

<table>
<thead>
<tr>
<th>Age</th>
<th>Spontaneous</th>
<th>To be Induced (in hosp.)</th>
<th>Induced Abortion (outside hosp.)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n=277</td>
<td>n-377</td>
<td>n=16</td>
<td>n=630</td>
</tr>
<tr>
<td>15-17</td>
<td>8.7</td>
<td>13.7</td>
<td>13.0</td>
<td>10.6</td>
</tr>
<tr>
<td>18-19</td>
<td>12.6</td>
<td>34.1</td>
<td>34.1</td>
<td>24.1</td>
</tr>
<tr>
<td>20-24</td>
<td>40.0</td>
<td>36.4</td>
<td>56.2</td>
<td>38.1</td>
</tr>
<tr>
<td>25+</td>
<td>40.0</td>
<td>17.2</td>
<td>18.8</td>
<td>27.2</td>
</tr>
<tr>
<td>Mean Age</td>
<td>21.7 Years</td>
<td>21 Years</td>
<td>21.7 Years</td>
<td>22.3 Years</td>
</tr>
<tr>
<td>Total*</td>
<td>53.5</td>
<td>44.0</td>
<td>2.5</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Abortion Characteristics</th>
<th>Under 20</th>
<th>20-24</th>
<th>25+</th>
<th>Mean Average</th>
<th>Composit Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Reporting in First Trimester</td>
<td>61.1</td>
<td>61.1</td>
<td>45.8</td>
<td>68.8</td>
<td>78.0</td>
</tr>
<tr>
<td>Mean % Who Had Previous Abortion</td>
<td>16.9</td>
<td>25.9</td>
<td>33.6</td>
<td>37.5</td>
<td>0.4</td>
</tr>
<tr>
<td>Mean Duration of Pregnancy (weeks)</td>
<td>13.3</td>
<td>13.5</td>
<td>14.5</td>
<td>11.3</td>
<td>11.5</td>
</tr>
<tr>
<td>% with Immediate Complications</td>
<td>3.4</td>
<td>7.4</td>
<td>9.1</td>
<td>25.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Mean % Septic</td>
<td>5.1</td>
<td>0.0</td>
<td>0.0</td>
<td>56.3</td>
<td>3.6</td>
</tr>
<tr>
<td>Mean Nights Hospitalized</td>
<td>1.2</td>
<td>1.6</td>
<td>1.5</td>
<td>1.8</td>
<td>0.75</td>
</tr>
<tr>
<td>Death</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6.3 (1)**</td>
<td>0.2</td>
</tr>
</tbody>
</table>

For instance, she estimated that ten induced abortions were performed daily at PCMH. These were generally performed on young girls, for humanitarian reasons, and on women who had experienced contraceptive failures. Stiles found that over 80% of those who had induced abortions were aged 15-24. About 30% of these had experienced previous abortions. Seventy-two percent of those under 15 and 65% of those aged 20-24, who had induced abortions failed to use contraception in the month of conception. This despite the fact that the younger adolescents tended to be more educated than the older ones. Another interesting, though perhaps not surprising, finding was that after induced abortion, contraceptive use rates went up substantially. For example, the proportion of adolescents who used contraception increased from 30% to 83% among those under 20 and from 34% to 85% among adolescents aged 20-24. The majority of these postabortal contraceptive users chose either orals or IUD.

Sexually Transmitted Diseases

There is very little reliable published data on this subject for Sierra Leone as a whole. However, the general consensus among those working on the subject in developing countries is that the incidence of sexually transmitted diseases (STDs) is high (Muir and Belsey, 1980; WHO, 1981). The actual level may, however, be extremely difficult to gauge due to paucity of information. In Sierra Leone, the 1979 Health Service Report observed that gonorrhoea came third, after malaria and worm infestation, in the total number of new cases treated as outpatients. Other STDs seen in decreasing frequency in the country are monilia, trichomonas, chancroid, chlamydia and herpes genitalis (Gooding, 1984).

What is known about STDs among adolescents in Sierra Leone indicates that these diseases are quite widespread. For example, in 1976, fully one-quarter of all students at "the University campus" had acquired one type of STD or another. This rate is reported to have dropped to 19% in 1980 and 16% in 1982 (Gooding, 1984). This pattern may not deviate much from the conclusion Osoba reached in his review of STDs in Tropical Africa. He wrote that "these diseases are highly prevalent and that a considerable reservoir of infection exists among the female population" (Osoba, 1981). But to be even-handed, research in other parts of the world shows that "men may be important in gonorrhoea transmission and may reinfect their sexual partners" (St. John, et al., 1980).

Maternal Mortality and Morbidity

Mortality and morbidity rates among adolescents are generally lower than in any other age group, with the exception of 5-14 year olds (WHO, 1977). However, for females pregnancy-related morbidity and mortality constitute an important aspect of their overall health. Most crosscultural and national studies demonstrate that medical and surgical complications of early (below age 20) and late (above age 24) childbirth are worse than those which occur in the 20-34 age group. According to the WHO publication Health Needs of Adolescents, pregnancy related deaths "are the main cause of death in 15-19 year old females . . ."
death rates from causes related to abortion and delivery are particularly high in girls below 18 years of age" (WHO, 1977). In a developing country like Sierra Leone, where overall health conditions are not very satisfactory and medical facilities are inadequate, these complications are aggravated. By any standard, Sierra Leone's estimated maternal mortality rate of 4.5 deaths per 1000 deliveries is high (UNFPA, 1983).

Among young adolescents, who generally record higher maternal mortality rates than the general adult female population, the rate may be higher than the overall rate. In fact, Stiles found that of the six maternal deaths in her study, three of them occurred among teenaged females aged 15-17.

Fertility

The fertility patterns of adolescents differ according to their marital status, marriage type, residence, education attainment and age at first marriage.

Among adolescents there are, expected, huge differentials in the fertility rates between the married and those who have never been married. The age at marriage for females is low and most fertility is marital. In 1973, for example, the age-specific fertility rates per 1000 females for the evermarried and single adolescents aged 15-19 were 302 and 11, respectively. In the older 20-24 age group, the differential between the two was 3 to 1. [Table 9]

<table>
<thead>
<tr>
<th>Age</th>
<th>Ever Married</th>
<th>Never Married</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-19</td>
<td>302</td>
<td>11</td>
<td>277</td>
<td>253</td>
</tr>
<tr>
<td>20-24</td>
<td>353</td>
<td>119</td>
<td>350</td>
<td>306</td>
</tr>
</tbody>
</table>

* Calculated on the basis of the number of the live births per 1,000 women in age group from the retrospective survey of 1974.


There is no detailed information available on Sierra Leone's age at marriage. Dow and Benjamin's did indicate, however, that the average age at first marriage was low but increasing and that it was higher in
the urban areas than in the rural areas. They calculated that the mean age at first marriage was only 15.7 years. The MOH/WHO study showed that the population experienced a slight increase, rising to 16.5 years, in its mean age at marriage during the early 1970s.

There is a very small difference between the age at first marriage and at first birth. This means that very few births occur outside marriage, whether customary or formal. The MOH/WHO study found that in 1973 only 0.4% of total live births took place out of wedlock. In its 1974-75 prospective survey of all registered live births, the MOH/WHO study found that only 0.7% of all live births were born to females who had never been married. All these births, however, occurred to females under 30 years of age, and most were to adolescents aged 20-24.

Polygyny is the norm in the country. Among the adolescent population there seems to be no significant difference in the fertility rate of those in polygynous and monogamous marriages. The mean parity for the two groups aged 15-19 was the same (0.8). For the older adolescents aged 20-24 the mean parity of 2.8 for those in polygynous unions was only slightly higher than those in monogamous unions (2.7).

The levels of fertility among adolescents do not seem to be affected by the marriage type. It is only after the adolescent age that marital status makes a small difference. (Dow and Benjamin found that the mean parity of monogamously married and polygynously married females aged 40-49 were respectively 7.3 and 7.5.) [Annex 2]

Most social scientists agree that certain aspects of urbanization like housing shortages, higher rents, falling real incomes, prolonged female education, increased individualism and the gradual breakdown of pronatalist cultural norms create favorable conditions for the acceptance of small family norms. On the other hand, it has also been observed that in the early stages of exposure to modernization fertility level may stabilize or even rise (Caldwell, 1975). And this is what is revealed in the two surveys conducted in late 1960s and early 1970s. In the Dow and Benjamin study, they found that "rural women have significantly higher parity than urban and metropolitan women". However, for the younger age groups under 25, the differences did not exist or were the reverse of the general theoretical pattern. The more recent MOH/WHO study, however, found a higher overall urban fertility and this was very pronounced in the age groups between 15 and 34. In the 1973 retrospective survey (part of the 1973-75 study), the age specific fertility rate for the urban and rural residents aged 15-19 were respectively 277 and 253. [Table 9] For those aged 20-24 the urban fertility rate was 350 and 306 for the rural residents.

The pattern of the age-specific fertility rates in the two studies demonstrate that the higher urban adolescent fertility is a relatively recent phenomenon. And this increase affected the group least expected to register increased fertility. These are the younger, ostensibly more educated, urbanized, modernized group who, in theory, would be more likely to accept delayed fertility and small family norms. All of this is possibly explained by the fact that the negative effects that "modernization" is thought to have on fertility were insufficient to
overcome factors that encourage higher fertility. The decline in the duration of postpartum abstinence, the lessening of the length of breastfeeding, in short, the weakening of traditional methods of fertility regulation, in addition, to better health and nutrition conditions in the urban areas and the attendant decline in pregnancy wastage, have all in the short-term led to higher fertility (MOH/WHO, 1980).

Increased female education has been found in most studies to be associated with lower fertility. Education is thought to influence fertility not only because it delays marriage but also because it exposes individuals to information on family planning methods and enhances motivation for adoption of small family norms (Carleton, 1975). However, education does not have a clear-cut negative relationship with fertility in Sierra Leone, at least in the earliest years. [Table 10]

| TABLE 10: Adolescent Females by Mean Parity (Number of Children Ever Born). Age, Education and Religion, Sierra Leone, 1969-70 |
| --- | --- | --- | --- |
| Age | Education 1+ Years | No Education | Religion |
| | | | Moslem | Protestant | Catholic |
| 15-19 | 0.9 | 0.8 | 0.8 | 0.9 | 1.4 |
| 20-29 | 2.2 | 2.8 | 2.7 | 2.5 | 2.0 |


Dow and Benjamin found that the mean parity among adolescents, aged 15-19, with one or more years of education both in metropolitan Freetown and in the rural areas was higher than the mean for those without any education. The reverse, however, was the case for those in the remaining urban areas. Among those aged 20-29, however the mean parity was higher among those without any education. Neither the MOH/WHO study nor that of Ketka disaggregated their data by age, but for the overall population, the relationship between education and fertility was again unclear. Ketka found that female education was negatively correlated with fertility (Ketka, 1979). The MOH/WHO study found that the fertility rate among the highly educated was the lowest, but that those with primary and secondary education recorded higher fertility rates than those without any schooling at all. The effects of modernization on fertility continue to evolve and may take some time before a clear pattern emerges.
Differences in fertility level among the three main religious groups were also unclear. Among adolescents aged 15-19 Catholics recorded the highest mean parity. [Table 10] This was followed by Protestants and Moslems. The reverse held with respect to females aged 20-29.

Time series data on the pattern of age specific fertility rates in Sierra Leone does not exist. But the indirect information presented in Table 11 shows that, among females aged 15-34, those who married early tended to have higher parities than those who married later. Table 11 also shows that those who married early tended to record higher age specific fertility rates than those who married later. This implies that if the present low modern contraceptive use rates among adolescents continue and they abandon practice of traditional means of fertility regulation, as it is thought they are, it is likely that the country's fertility rate may rise instead of fall as projected by the National Population Commission during the 1984-1999 period.

TABLE 11: Average Number of Children Ever Born and Age Specific Fertility Rate by Current Age of Mother and Age at First Marriage, 1974-75

<table>
<thead>
<tr>
<th>Current Age of Mother</th>
<th>Age at First Marriage</th>
<th>Number Children Ever Born</th>
<th>Age Specific Fertility Rate Age at First Marriage</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-19</td>
<td>15-19</td>
<td>1.30</td>
<td>334</td>
</tr>
<tr>
<td>15-19</td>
<td>20-24</td>
<td>2.75</td>
<td>419</td>
</tr>
<tr>
<td>15-19</td>
<td>25-29</td>
<td>3.98</td>
<td>352</td>
</tr>
<tr>
<td>15-19</td>
<td>30-34</td>
<td>5.12</td>
<td>269</td>
</tr>
</tbody>
</table>

IMPLICATIONS OF ADOLESCENT FERTILITY

Introduction

Adolescents in Sierra Leone differ not only from the adult population but among themselves. Although the average age at first marriage is believed to be rising among adolescents, mainly due to increasing school enrollment ratios, the age at which most Sierra Leonean female adolescents marry and begin childbearing is still low. This has very important implications for countries, like Sierra Leone, which are trying to improve the quality of life for their populations. This section will examine some of the demographic, social, medical and health impacts of adolescent sexuality and reproduction in the country.

Medical and Health Implications

Early initiation of sexual activity, pregnancy and childbirth raise serious public health issues. They are associated with negative medical and health complications which affect not only the young mother but the child as well. In most parts of Sierra Leone early marriage ensures that most pregnancies (and births) occur within marriage. Young brides receive, then, the maximum of moral and material assistance not only from her extended family but also from her husband, usually somewhat older and experienced, and (in polygynous unions) from the senior wife or wives as well. Unfortunately, this moral and material assistance cannot prevent the onset of most of the medical and health risks associated with early pregnancy, particularly those occurring to females under 18 years of age.

Age at Menarche

During the past decade increasing attention has been given in both developed and developing countries to the medical and health consequences of early pregnancy. The numbers of pregnancies to adolescents has risen not only because the adolescent population has increased but also because adolescent subfecundity has declined (Cutright, 1972; McGrath, 1979). The latter is due mainly to improvements in health, medical and nutritional conditions which gradually reduced the age at menarche (Frisch and McArthur, 1974). This development has been complicated by an increasing gap between the earlier age of social maturity and the later age of marriage, arising mainly from persistent increases in the period devoted to formal education and vocational training.

Sierra Leone is experiencing these so-called biosocial changes, too. Average age at marriage has increased and age at menarche has also fallen in concert with the patterns found in other African countries (Kumekpor, 1973; Kenya Central Bureau of Statistics, 1980; Igaga, 1981). The estimated average age at menarche in the early 1980s was below 14 years of age. One hundred years ago it was about 17 years.
Complications Arising from Early Pregnancy

Worldwide the number of pregnancies, abortions and childbirths to adolescents are generally on the increase. All these outcomes have very serious and negative consequences on the young mothers, their children and on the health care resources of countries like Sierra Leone. The seriousness of these results are best illustrated by examining available pregnancy-related mortality and morbidity information on adolescents.

The health risks associated with pregnancy are high for adolescents under 20 years of age. They decline in age group 20-30 and rise again after age 30-35. This pattern generally holds throughout the world, although poor living conditions, nutrition, antenatal care and inadequate health education may aggravate the situation.

These complications affect not only the teenage mothers but the children as well (Population Report, 1976, 1984a). Complications for the mother include first and third trimester bleeding, severe anaemia, prolonged difficult and obstructed labor, cephalopelvic disproportion, preclampsia and eclampsia, and a high incidence of surgical deliveries. For the children, low birth weight, prematurity, stillbirth and high perinatal mortality are common. Low birth weight and prematurity can jeopardize the health of the newly born for a life time.

Available information from the 1974-75 MOH/WHO prospective survey indicates that Sierra Leone does not differ much from the general world pattern. [Table 12] The study shows that adolescents aged 15-24 were responsible for 38% of all the pregnancy-related complications and that the bulk of this was concentrated among those aged 15-19. Adolescents aged 15-24 also accounted for 55% and 44% respectively of all urinary infections and infections of the genital tract during pregnancy. The data, however, failed to confirm the high incidence of eclampsia, pre eclampsia and operation deliveries. In fact, eclampsia and pre eclampsia were not found among adolescents. Virtually all the adolescents had normal deliveries, 99% for those aged 15-19 and 98% for the older adolescents. The findings with respect to eclampsia, pre eclampsia and normal deliveries are similar to those of Njogu and of Ngoka and Mati in Kenya (Njogu, 1980; Ngoka and Mati, 1980).

The MOH/WHO study and the results of similar worldwide studies show that the pattern of medical and obstetrical complications associated with adolescent pregnancy are similar throughout the world. Data on the incidence of these complications, however, are generally higher in developing countries, like Sierra Leone, because of the influence of poverty and ignorance and the lack of efficient, comprehensive prenatal and postnatal care. The obstetrical and paediatric complications for the adolescent mother and child in the developing countries tend to be more life-threatening. Mortality data bear this out.

Age at pregnancy may be an important factor but there are other equally significant factors that affect adolescent pregnancy-related mortality and morbidity. These include the mother's parity, her socioeconomic status, maternal care and the legitimacy of the child (IPPF, 1970; Deschamps and Valentin, 1978).
TABLE 12: Distribution of Complications of Pregnancy, Childbirth and the Puerperium by Age of Mother: Prospective Survey, 1974-75

<table>
<thead>
<tr>
<th>Complications of Pregnancy and Puerperium</th>
<th>Total</th>
<th>Under 15</th>
<th>15-19</th>
<th>20-24</th>
</tr>
</thead>
<tbody>
<tr>
<td>All complications reported</td>
<td>166</td>
<td>2</td>
<td>39</td>
<td>24</td>
</tr>
<tr>
<td>Anaemia of pregnancy</td>
<td>45</td>
<td>8</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>Abortions</td>
<td>43</td>
<td>1</td>
<td>13</td>
<td>6</td>
</tr>
<tr>
<td>Urinary Infections</td>
<td>34</td>
<td>1</td>
<td>13</td>
<td>6</td>
</tr>
<tr>
<td>Infections of genital tract during pregnancy</td>
<td>22</td>
<td>1</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Pre-eclampsia, eclampsia and toxemia unspecified</td>
<td>17</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Antepartum haemorrhage</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Puerperal phlebitis and thrombosis</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>P.U.O. in the puerperium</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Anaemia of puerperium</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other and unspecified complications</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Deliveries and Complications of Childbirth

<table>
<thead>
<tr>
<th>Deliveries and Complications of Childbirth</th>
<th>Total</th>
<th>Under 15</th>
<th>15-19</th>
<th>20-24</th>
</tr>
</thead>
<tbody>
<tr>
<td>All deliveries</td>
<td>510</td>
<td>1</td>
<td>97</td>
<td>150</td>
</tr>
<tr>
<td>Normal deliveries</td>
<td>502</td>
<td>1</td>
<td>96</td>
<td>147</td>
</tr>
<tr>
<td>Deliveries complicated by:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malpresentation of fetus</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prolonged labor of other origin</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delivery with other complications</td>
<td>5</td>
<td></td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>


The unfortunate reality in countries such as Sierra Leone is that the majority of adolescents who become pregnant at very early ages do not receive the benefit of satisfactory maternity services. Their offspring are denied adequate pediatric attention because such services are expensive and often unavailable. Among the few who have access to these services, a substantial proportion do not fully utilize them because of the following reasons: hesitation in seeking obstetric care because of inexperience; ignorance and immaturity; drop-out or noncompliance with clinic appointments because of intimidation and embarrassment; and inappropriate adult-oriented obstetric and gynecologic care which fail to address the special emotional and psychosocial problems of young adolescents. The unmarried but pregnant adolescent in Sierra Leone, like her counterpart in most other African
countries, thus faces an unenviable dilemma of either procuring a criminal abortion, with all the attendant complications, or carrying the pregnancy to term. If she is a student and takes the latter course of action she may have to drop-out of school, experience very probable lower future social mobility, incur shame and embarrassment for herself and her family in addition to facing the associated risks of early childbirth. For the married pregnant adolescent, the advantage of psychosocial and material support from spouse and other family members may not be enough to overcome the medical and surgical complications, particularly if, as is often the case, she does not receive adequate obstetric care. Moreover, the children from such pregnancies do not generally fare well medically compared to their counterparts born to mothers between the ages of 20 and 34.

**Pregnancy Termination**

Available data from countries in the West of Africa demonstrates that the incidence of abortion (particularly illegal abortion) is very high among the adolescent population, despite the illegal nature of abortion, the social and religious taboos against it and the high economic cost involved in procuring the service. These factors tend to influence the demand for the services of unqualified abortionists who include nurses, midwives, dispensers, hospital attendants and "native doctors". These persons usually operate under very poor hygienic conditions. Patients are sent to hospitals only when serious and often fatal complications develop.

Accurate and reliable countrywide data on the subject of abortion are, unfortunately, not available. But the MOH/WHO report and Stiles' 1982 abortion study do provide a fairly good indication of some dimensions of the problem. Abortion continues to be an important public health problem in Sierra Leone. Clandestine, unsafe induced abortion is a major cause of maternal mortality in Sierra Leone. In a 1972-73 study conducted at Maternity and Connaught Hospitals in Freetown, Williams found that abortions accounted for 11% of all maternal deaths in these hospitals (Williams, 1979). Induced abortion is also responsible for a considerable amount of morbidity. The MOH/WHO study found that except for anaemia, abortion was the most prevalent complication of pregnancy and puerperium in the general female population. Stiles found that 56% of all abortions induced outside the hospital were septic; compared with 3% for those with spontaneous abortion (miscarriage).

Abortion and its associated complications therefore contribute to the tragic loss of human lives and tie down a considerable proportion of an already overstretched health personnel and facilities in developing countries like Sierra Leone.

**Sexually Transmitted Diseases**

Though STD research in developing countries does not receive the same attention as the more life-threatening diseases like malaria, pneumonia and diarrhoea, most researchers are becoming increasingly aware that the consequences are such that they warrant more intensive studies (WHO, 1981). The consequences of STDs in Sierra Leone are not
fully known but may again be similar to those that Osoba found in his review of STDs in Tropical Africa. He reported that gonorrhoea, the most recognized STD, frequently causes "epididymitis and urethral stricture in men and salpingitis and pelvic inflammatory disease in women." The high incidence of infertility in Sierra Leone may be influenced by these diseases.

These complications are however not restricted to men and women but to children as well. The most common of these are ophthalmia in neonates and congenital syphilis. The actual incidence of these diseases in Sierra Leone is not known but their existence is at least acknowledged. And a few studies have been carried out in the country. The 1974-75 MOH/WHO prospective survey, for instance, identified one case of congenital syphilis and 13 cases of conjunctivitis and ophthalmia among 1067 cases of children aged under 5.

In most developing countries indiscriminate use of penicillin has played an important role in reducing the high incidence of most STDs (Rampen, 1978). However, recent increase in nongonococcal STDs, and increase in some gonococcal strains, insensitive to the frequently used penicillin and other less expensive antibiotics, pose a serious threat to the containment of STDs especially among adolescents who are becoming sexually active at younger and younger ages (Perine, et al., 1980; Catterall, 1981). A Sierra Leonean study concluded in March 1984 found that "all the strains of Gonorrhoea isolated were penicillin-resistant and penicillinase producing. This is alarming as the drugs required to treat penicillinase producing Neisseria Gonorrhoea are extremely expensive" (Gooding, 1984). The seriousness is aggravated by the chronic nature of many STDs, and complicated in countries, like Sierra Leone, where most of the primary cases of STDs are treated by unauthorized and unqualified pharmacists, nurses and druggists outside approved hospitals and clinics. In the words of Gooding:

... it was erroneously believed that Gonorrhoea in men is always symptomatic, they get the disease and women did not. Now we know that there is a group of individuals, at least 10% of our population, that are asymptomatic, both men and women. These people have no signs or symptoms of the diseases but they carry the germs in their genitalia and spread it during sexual contact. Our pool of asymptomatic individuals is large because people swallow a few capsules or take a few penicillin shots to stop the discharge or abnormal pain. The germs do not die but stay in the genitalia to be transmitted to another person. This practice of self-medication is mentioned only to be condemned.

Demographic and Social Impact

Marriage Patterns and Fertility

The relationship between age at first marriage, on one hand, and high rates of fertility and population growth, on the other, is strong in countries like Sierra Leone, where a very large proportion of the female population does not practice contraception. Early marriage tends
to shorten the period between generations, lengthen the reproductive
life of women and thereby increase the overall rates of fertility and
population growth. Hajnal's classic study showed that one of the most
important reasons responsible for the European fertility decline during
its demographic transition to low fertility and mortality levels was the
increase in the marriage age (Hajnal, 1965). Early marriage has been
associated in most societies with high fertility.

However, data from African countries, where total fertility rates
generally range from moderate to high, show practically no relation
between early marriage and overall fertility. This is due to
involuntary infertility, high rates of polygamy, marital instability,
the use of traditional means of fertility regulation including abortion,
prolonged period of breastfeeding and postpartum sexual abstinence.
These same traditional practices lie behind Sierra Leone's fertility
level (Harrell-Bond, 1975; Dow and Benjamin, 1975; IFPRI, 1979). Without
these confounding factors, the expected total fertility of Sierra Leone,
for instance, would have been one of Africa's highest, since over 80% of
females aged 15-19 in 1970 were married.

On the other hand, there is substantial positive relationship
between early marriage and the level of adolescent fertility in African
countries, including Sierra Leone. The effect of involuntary
infertility, marital instability and the use of traditional means of
fertility regulation seems to be negligible in this age group. Strong
social pressure is exerted by the extended families of the couple to
have children during the first year of marriage. Some of this explains
the high age specific rates for adolescents in Sierra Leone.

Social, Economic and Educational Impacts

The social and economic consequences of early marriage and child
birth on the mother and child are also notable. The effect on the
former is much worse if she is unmarried and the child is born out of
wedlock. Early pregnancy, particularly out of marriage, drastically
restricts the future opportunities for social and economic advancement
of the adolescent parent. For those in school, it invariably results in
either temporary interruption or complete cessation of education and
the consequent limitations on career-oriented practices. The formal school
system in Sierra Leone, like others in the developing countries, makes
little attempt to address the needs of pregnant schoolgirls. Adolescents
females electing to continue a pregnancy to term either drop out of
school involuntarily or are officially dismissed. As a result, those
who wish to remain in school must either resort to clandestine, illegal
abortion, with all its attendant risks, or withdraw until the child is
born, entrusting its care to another, before returning to the cl-

With respect to legal rights of the children, it is generally
believed that the gap between the rights of legitimate and illegitimate
children throughout the world is closing (Lee and Paxman, 1974). In
Sierra Leone, the gap continues to be wide. Children born outside
marriage still do not have the same property rights as those born
legitimately. In 1961, the Sierra Leone Bastardy Laws (Increase of
Payments) Ordinance apparently increased the child maintenance
allowances paid to mothers of such children. On the other hand, the 1965 bill to abolish illegitimacy by doing away with all legal discrimination, particularly as it related to inheritance rights, was dropped because of very strong opposition from the legally married women, church organizations and the bar association (Harrall-Bond, 1975). Moreover, within the poor urban communities the influence of the extended family which used to provide for the needs of all children, including the illegitimate, is gradually declining. Children born out of wedlock to adolescents in such communities are increasingly becoming neglected and abandoned.

The Sierra Leone tradition favors early marriage among females. Yet times are changing. Early marriage may still soften some of the social and psychological problems arising from social disapproval and discrimination which the young unwed adolescent mother and her parents may encounter. However, these advantages cannot counter the almost guaranteed future lower socioeconomic status of the adolescent who drops out of school to marry or to deal with the consequences of an unwanted pregnancy.

Briefly stated, a combination of decline in adolescent subfecundity, a decline in the age at menarche, increased adolescent sexual activity, low modern contraceptive use rates and the tremendous rise in the size of the female adolescent population has resulted in an increase in the number of pregnancies, abortions, STDs, their associated complications and loss of human lives. These factors pose problems not only for individuals and families but also strain the resources of the community, and even the nation.

The tragedy which befalls some pregnant adolescents in Sierra Leone is, by itself, a drama. If she is a student she faces the dilemma of having to choose between procuring an illegal abortion, most likely from an unqualified abortionist with all the attendant complications, or carrying her pregnancy to term and risk expulsion from school, an option that will expose her to shame and embarrassment, lower future social and economic mobility, in addition to facing the risks associated with early childbirth. For the married adolescent, who experiences pregnancy at a very young age, the advantages of emotional and material support proffered by the spouse and other family members may not be enough to overcome the deleterious health consequences, particularly if, as is often the case, she fails to receive adequate prenatal care.

Another problem most young, pregnant adolescents face, even when health services are available for their use, is that maternal and child health service in Sierra Leone, like in most parts of Africa, generally do not cater to the special needs of adolescents. The emotional and other psychosocial problems that the pregnant teenager faces are often overlooked. This is complicated by their ignorance and immaturity, which leads many of them to hesitate before seeking pregnancy-related medical care, thereby increasing the potential seriousness of any complications.

This study has for convenience been restricted to the contribution and implications of early pregnancy and childbirth on the part of
adolescent females. It should, however, be emphasized that the role of male adolescents is equally important and that the social and economic impacts may be just as severe. Though he may not be expelled from school, enough pressure could be exerted to force the young man to abandon school or to enter into unwanted early marriage. These may, in turn, compromise his future social advancement and job prospects. The initial shock arising from sudden elevation to the status of a father or potential father is often greeted with denial of paternity or the suggestion, made to the young woman, that pregnancy termination be sought. Moreover, since few parents pursue such disputed paternity suits, the young woman and her parents usually bear the brunt of the attendant medical, social and economic consequences of the pregnancy. This instant denial, or the cases of "disappearing fathers," is a serious problem in most African countries, including Sierra Leone. Since many of the sexual partners of female adolescents are also male adolescents, it is important that any family health services or family life education programs for adolescents be offered to both males and females.

The problems associated with adolescent sexuality and reproduction are immense in Sierra Leone and are increasing in complexity. Should the current trends continue, the country will be faced in the next couple of decades with an increase of unwanted adolescent pregnancies and consequent abortions as the huge under 15 age-group enters the reproductive age span. Dealing with these problems will take planning, financial resources, and a strong commitment from Sierra Leone policymakers and health care service providers in the years ahead.
CONCLUSION: SUMMARY OF KEY POINTS

This overview has utilized mainly secondary data sources to describe the context in which adolescent fertility occurs Sierra Leone. It has attempted to also describe, to the extent known, the socioeconomic characteristics of adolescents, in addition to the demographic, social, medical and health implications of adolescent fertility in the country. The following is a summary of the main findings of the overview:

Socioeconomic Characteristics of Adolescents

1) Adolescents aged 15-24 are an important segment of the Sierra Leone's population. The rate of growth of the group is faster than most other groups. The total adolescent population in 1974 was 442,564 -- 16.2% of the total population. It is projected that by 1989 adolescents will form 18.2% of the country's population. This will rise further to 18.4% by the year 1999. [Annex 1]

2) The general level of education in the country is low but the adolescents, on the whole, tend to be more educated than the older adult population. Male adolescents continue to have higher educational attainment and enrollment ratios than the females, although the gap between them has been declining slowly over the past decade.

3) Marriage is almost universal in the country, and females tend to marry at very early ages. In the late 1960s the mean age at marriage was 16 years and only 5% of females in the age group 15-19 remained single. This contrasts with males who marry at a much later age. Ninety-four percent of males aged 15-19 in the Western area were still single during the early 1970s.

4) Female age at marriage is rising, though. Between the late 1960s and early 1970s the proportion of single females aged 15-19 increased from 5% throughout the country to 28% in the Western area.

5) Islam is the predominant religion in the country and its popularity is increasing among adolescents. In 1969-70 80% and 76% of adolescents respectively aged 15-19 and 20-29 were Moslems.

6) Economic activity rates among adolescents are low but particularly so among the females. These rates are expected to decline as a result of improvement in enrollment ratios. This will lead to further increases in the country's dependency ratios.

7) Surprisingly, female adolescents outnumbered males in the urban areas.

Reproductive Health Behavior

1) Adolescents as a proportion of women in reproductive age groups are very substantial and increasing at a faster rate than those aged 25-49. The adolescent percentage of the childbearing population is expected to increase from 36.4% in 1974 to 39.7% in 1989 and 40.4% in the year 1999.
2) The adolescent fertility rates in the country are among the highest in Africa in spite of the fact that Sierra Leone's overall fertility rates are not. The age specific fertility rates of 212 and 279 per 1000 females aged 15-19 and 20-24, respectively, in the early 1970s bear testimony to this.

3) In 1973 teenage mothers aged 15-19 accounted for 17% of Sierra Leone's total fertility rate. What is happening a decade later is unknown.

4) Contraceptive use rates among sexually active adolescents is low but seems to have increased during the 1970s. In the late 1960s only 12% of "urban" residents and 18% of residents of Freetown aged 15-49 ever practiced family planning. But the PCMH study found that 30% of females under 20 and 34% of those aged 20-24 who had induced abortions at the hospital used modern contraception before their pregnancies. An overwhelming percentage undertook contraceptive practice after experiencing abortion.

5) Induced abortion, which was virtually unknown in the traditional society, seems to be increasing among adolescents. During 1980-81 it is estimated that ten induced abortions were performed a day for young girls at PCMH, either for reasons of humanitarian concerns or because of contraceptive failure. The increase in the number of adolescent abortions is attributed mainly to a reduction in adolescent subfecundity, inadequate provision of family planning and counselling services and the probable increase in sexual activity among adolescents.

6) There is a tendency for contraceptive use rates among adolescents to increase substantially after abortion. The proportion of modern contraception users in the PCMH study rose from 30% to 83% among those aged under 20 and from 34% to 85% among adolescents aged 20-24.

7) The most popular modern contraception among adolescents before and after an abortion experience are orals and to a lesser extent IUDs.

8) STDs in the country are the third most treated out-patient disease, and a serious public health problem. Little detailed published data exists on STDs among adolescents. It is, however, believed that their incidence is high, though diminishing. As recently as 1982, some 16% of university students were found to have contacted one form of STD or another. The reported high rates of infertility and the existence of congenital syphilis and ophthalmia among children under 5 also provide evidence of their prevalence.

9) Maternal mortality rates are high but no data are available for adolescents. The PCMC study, however, found that three of the six maternal deaths occurred among adolescents aged 15-17.

10) Data on adolescent morbidity are also not available. The MCH/WHO study, however, found that their pregnancy-related morbidity rates (like urinary and genital tract infection) were high. These rates refer particularly to the younger adolescents aged 15-19.
11) Fertility differentials were found among adolescents with respect to marital status, marriage type, residence, education and age at first marriage. These are as follows:

a) The fertility level of ever married adolescents was very high compared to those who have never been married. In 1973 the age specific fertility rates for the married and single adolescents aged 15-19 were 302 and 11 respectively; among those aged 20-24 the ratio was 3 to 1.

b) There is virtually no difference in the fertility levels of adolescents in polygynous or monogamous marriages.

c) Adolescents in urban areas recorded higher fertility rates than their rural counterpart.

d) Education does not have a clear cut negative relationship with fertility among adolescents, as is the case in other settings. In the 1969-70 study it was found that the mean parity among adolescents with at least one year of education aged 15-19 and residing in metropolitan Freetown and in the rural areas was higher than for those without any education. The reverse was the case in the remaining urban areas. Among those aged 20-29, however, the mean parity was higher among those without any education.

e) Early marriage was found to be associated with high fertility.

Implications of Adolescent Fertility

1) Though the adolescent fertility level is high, the low age at marriage tends to guarantee few births being born out of wedlock. In 1973 and 1974-75 only 0.4% and 0.7% of all live births were borne by single women and all occurred among those aged under 30. However, if age at marriage continues to rise without any commensurate fall in adolescent fertility it is very likely that the proportion of children born out of wedlock may increase.

2) General persistence of low marriage age, combined with low contraceptive use rate and gradual fall in the age at menarche, indicates that the potential for high fertility rate in the country may continue for a long time unless specific programs are taken to influence these factors.

3) The pattern of medical and obstetrical complications associated with adolescent pregnancy in Sierra Leone does not differ markedly from the general world pattern. Adolescents aged 15-24 were responsible for 36% of all pregnancy-related complications (with most of them in the 15-19 age group), and accounted for 35% and 44% respectively of all urinary and genital tract infections. These imply that with continuing increase in the numbers of these adolescents the general level of maternal morbidity and mortality may be negatively affected.
4) Available data failed to confirm the existence of high incidence of eclampsia, preeclampsia, and difficult deliveries among adolescents in Sierra Leone. In the MOH/WHO study, the incidence of eclampsia among adolescents was nil. The vast majority of deliveries among those aged 15–19 and 20–24 were normal (99% and 98%, respectively). This suggests that though age may be important there are other significant factors that affect adolescent pregnancy-related mortality and morbidity in the country. These include mother's parity, her socioeconomic status, prenatal and maternal care and the legitimacy of the child.

5) Illegal, non-hospital-induced abortions tend to tie up more hospital personnel and facilities compared to hospital-induced or spontaneous abortions because of their close association with medical complications, septic infections and hospitalization. Continued increase in the numbers of illegal abortions, aside from creating individual tragedies, will place further stress on the country's medical and health resources.

6) Pregnancy and school attendance among adolescent females are virtually incompatible in Sierra Leone at the moment. The gradual rise in the number of pregnancies among adolescents implies, therefore, a corresponding increase in the number of female school drop-outs in the future. This means that most of those affected would be unable to develop to their full potential and hence will compromise their socioeconomic potential as well as the future of their children and society.
ANNEXES
ANNEX 1: DEMOGRAPHIC INDICATORS, SIERRA LEONE, 1979-1999

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>Population by sex</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Total (In 000's)</td>
<td>2986</td>
<td>3297</td>
<td>3678</td>
<td>4136</td>
<td>4657</td>
</tr>
<tr>
<td>2. Male (In 000's)</td>
<td>1506</td>
<td>1680</td>
<td>1888</td>
<td>2135</td>
<td>2406</td>
</tr>
<tr>
<td>3. Female (In 000's)</td>
<td>1480</td>
<td>1617</td>
<td>1790</td>
<td>2001</td>
<td>2251</td>
</tr>
<tr>
<td><strong>Dependency Ratios</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Age Group 0-14</td>
<td>75.4</td>
<td>77.6</td>
<td>80.0</td>
<td>81.3</td>
<td>83.4</td>
</tr>
<tr>
<td>5. Age Group 65+</td>
<td>6.0</td>
<td>5.6</td>
<td>5.7</td>
<td>5.8</td>
<td>6.0</td>
</tr>
<tr>
<td>6. Total</td>
<td>81.4</td>
<td>83.2</td>
<td>85.7</td>
<td>87.1</td>
<td>89.4</td>
</tr>
<tr>
<td><strong>Specific Age Groups</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Adolescents/Youth (In 000's)</td>
<td>551</td>
<td>602</td>
<td>668</td>
<td>762</td>
<td>877</td>
</tr>
<tr>
<td>8. Women: 15-49 (In 000's)</td>
<td>699</td>
<td>762</td>
<td>837</td>
<td>924</td>
<td>1033</td>
</tr>
<tr>
<td>10. Women: 20-24/15-49 (%)</td>
<td>18.4</td>
<td>18.4</td>
<td>18.4</td>
<td>18.6</td>
<td>18.5</td>
</tr>
<tr>
<td><strong>11. Population Density (per sq km)</strong></td>
<td>41</td>
<td>46</td>
<td>51</td>
<td>57</td>
<td>65</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Rate of Annual Change</th>
<th></th>
<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>13. Population Change Total (%)</td>
<td>2.01</td>
<td>2.21</td>
<td>2.37</td>
<td>2.40</td>
<td></td>
</tr>
<tr>
<td>14. Crude Birth Rate</td>
<td>48.55</td>
<td>47.98</td>
<td>47.27</td>
<td>46.51</td>
<td></td>
</tr>
<tr>
<td>15. Crude Death Rate</td>
<td>31.07</td>
<td>28.10</td>
<td>25.45</td>
<td>23.07</td>
<td></td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Per Cent Urban (%)</th>
<th>21.1</th>
<th>24.5</th>
<th>28.3</th>
<th>32.2</th>
<th>36.2</th>
<th>40.2</th>
</tr>
</thead>
</table>

| Infant Mortality Rate                             | 215   | 200   | 186   | 173   | 160   |


ANNEX 2: GENERAL DEMOGRAPHIC MEASURES FOR MALES AND FEMALES AGED 15-24

<table>
<thead>
<tr>
<th>Year</th>
<th>Measure</th>
<th>Females 15-19</th>
<th>Females 20-24</th>
<th>Males 15-19</th>
<th>Males 20-24</th>
</tr>
</thead>
<tbody>
<tr>
<td>1974-75a</td>
<td>Education % Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>With no Education</td>
<td>71.9</td>
<td>79.3</td>
<td>50.3</td>
<td>71.0</td>
</tr>
<tr>
<td></td>
<td>With Education</td>
<td>28.1</td>
<td>20.7</td>
<td>49.7</td>
<td>29.0</td>
</tr>
<tr>
<td>1969-70b</td>
<td>Marriage Type % Total</td>
<td>100</td>
<td>100</td>
<td>(20-29)</td>
<td>(20-29)</td>
</tr>
<tr>
<td></td>
<td>Polygynous</td>
<td>58.3</td>
<td>57.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Monogamous</td>
<td>41.7</td>
<td>42.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1974a</td>
<td>Still Birth Ratios</td>
<td>Under 19</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(late foetal deaths per 1,000 live births)</td>
<td>46.2</td>
<td>21.6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources:


### ANNEX 3: SUMMARY OF POPULATION EDUCATION AND FERTILITY-RELATED PROGRAMS IN SIERRA LEONE, 1976-83

<table>
<thead>
<tr>
<th>Name of Project, Location, Recipient of Grant</th>
<th>Funding/Executing Agency</th>
<th>Adolescent-Oriented Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population Education Project</td>
<td>UNFPA/UNESCO</td>
<td>To integrate population education into secondary school curricula by developing an educational program for teachers and students. To produce teaching and learning materials for the Social Studies curriculum in Forms I, II, and III of Secondary Schools. (Since 1976)</td>
</tr>
<tr>
<td>Fertility Advisory Services/Family Health</td>
<td>UNFPA/WHO Margaret Sanger Center</td>
<td>To assist women to avoid unwanted pregnancies. Provide population education. (Since 1977).</td>
</tr>
<tr>
<td>Lumley Health Center (Fertility Advisory Service)</td>
<td>Govt./UNFPA</td>
<td>Strengthen MCH delivery system through integrated family health approach including modern family planning methods and services.</td>
</tr>
<tr>
<td>Population and Family Welfare Education</td>
<td>UNFPA/ILO</td>
<td>&quot;To create an understanding and awareness at all levels in the cooperatives of the nature and implications of population and family welfare issues by incorporating population and family welfare education into their basic education program, with a view to promoting better quality of life for cooperative members and their families.&quot; This program covers over 1,000 cooperative societies with over 50,000 members, 90% of which are in rural areas and over 15,000 of the members are women.</td>
</tr>
<tr>
<td>Name of Project, Location, Recipient of Grant</td>
<td>Funding/Executing Agency</td>
<td>Adolescent-Oriented Objectives</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>--------------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>Princess Christian Maternity Hospital</td>
<td>Association for Voluntary Sterilization (AVS)</td>
<td>To upgrade existing fertility and infertility management services (Since 1980). According to Stiles &quot;the hospital staff performs an estimated ten induced abortions per day for young girls for humanitarian concerns and for those women who experienced contraceptive failures.&quot;</td>
</tr>
<tr>
<td>Ministry of Health</td>
<td>AVS</td>
<td>&quot;To contribute to the integration of voluntary surgical contraception and infertility management techniques&quot; routinely made available to clients in provincial hospitals. (Nov. 1982 - May 1984).</td>
</tr>
<tr>
<td>United Christian Council of Freetown</td>
<td>Church World Service</td>
<td>For Family Life Education (1980). In order to extend its services in rural areas, the association's outreach program through mobile units, provide services to outlying villages near urban centers.</td>
</tr>
<tr>
<td>Planned Parenthood Association of Sierra Leone</td>
<td>IPPF</td>
<td>&quot;There are projects for increasing family life education among Sierra Leonean youth; women's projects aim to improve the socioeconomic status of women and to provide them with family planning services.&quot; (Since late 1970s).</td>
</tr>
<tr>
<td>Sierra Leone Home Economics Association</td>
<td>Family Planning International Assistance and American Home Economics Assoc.</td>
<td>Aims &quot;to expand family life, sex, responsible parenthood and family planning information to 10,200 youths and 2,620 adults through school based activities and women's and parents' meetings.&quot;</td>
</tr>
<tr>
<td>Name of Project,</td>
<td>Funding/Executing Agency</td>
<td>Adolescent-Oriented Objectives</td>
</tr>
<tr>
<td>------------------</td>
<td>--------------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>Location, Recipient of Grant</td>
<td></td>
<td>Development of prototype curric­ulum materials for primary and secondary schools; preparation of resource materials and source books for teachers of population family life education; provision of family welfare education and counselling; research on attitudes of college students to family planning and population issues; publication and distribution of teaching and learning materials and aids.</td>
</tr>
<tr>
<td></td>
<td>Sierra Leone Home Economics Association; British Overseas Development Administration</td>
<td>Thrust of SLHEA has been directed at out of school and in school population but with emphasis on the former. Its strategy for the out of school population has been interpersonal community-based approach and appealing through the mass media and on handouts (Since 1976). &quot;Field workers will visit homes, marketplaces, and factories to provide information and to distribute foam and condoms. In 1984 special emphasis will be placed on the role of males &quot;in family planning&quot;.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Preparation of instructional print material on proper use of the pill and IUD. (March 1982 to February 1983). To &quot;develop, print, and field text illustrative booklets on the condom, injectables, and foam for illiterate and low-literate men and women in Sierra Leone&quot; (March 1983 to 1984).</td>
</tr>
<tr>
<td>Name of Project, Location, Recipient of Grant</td>
<td>Funding/Executing Agency</td>
<td>Adolescent-Oriented Objectives</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>--------------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>Methodist Church Sierra Leone/ Nixon Memorial Methodist Hospital</td>
<td>Family Planning International Assistance</td>
<td>To &quot;provide family planning services to 660 new and 200 continuing clients throughout the 117 villages in the chiefdom, 3-050 voluntary sterilizations will be made; 8 midwives and 5 nurses will be trained in family planning 15C, motivation and service delivery (May 1982-August 1984).</td>
</tr>
<tr>
<td>Port Loko Teachers' College (Local Funds)</td>
<td></td>
<td>Developed outline course on family life education as part of Home Economics curriculum; offered on trial basis during 1980-82 and may be used later if found satisfactory. Course includes themes like population activities, responsible living, counselling, human development, sex education, and family planning.</td>
</tr>
<tr>
<td>The Bunumbu Teacher College (Local Funds)</td>
<td></td>
<td>Development of new primary school curriculum with rural biased core and including population and family life education themes. New curriculum was tested in 20 pilot primary schools in Bunumbu area.</td>
</tr>
<tr>
<td>Fourah Bay College, Demographic Research (Local Funds)</td>
<td></td>
<td>Formal undergraduate level teaching in demography in geography, economics, and sociology departments. Courses offered include techniques of demographic analysis, population theory and policy, social demography (demography and urbanization) and introduction to social sciences (demography).</td>
</tr>
<tr>
<td>Name of Project, Location, Recipient of Grant</td>
<td>Funding/Executing Agency</td>
<td>Adolescent-Oriented Objectives</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>--------------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>Njala University College</td>
<td>College (Local Funds)</td>
<td>Three courses offered at the Department of Geography and Environment Studies. These comprise Introduction to Demography, Demographic Techniques and Population and Agriculture. Other departments offer closely related courses. These comprise: Nutrition, Child Care and Family Development (Home Economics Dept.); Agricultural Economics and Extension Dept--Rural Development, Migration and Food Production, Demand and Supply; Mathematics--Statistical Techniques in Fertility Analysis; Biological Sciences--Morbidity; Environmental Studies and Geography--Teaching of General Demography; Teacher Education--Population Education Science.</td>
</tr>
</tbody>
</table>

Sources:
ANNEX 4: ANNOTATED BIBLIOGRAPHICAL NOTES

A number of surveys have been conducted in the country which touch on some aspects of adolescent fertility and its implications. The most pertinent of these include the following which are readily available:

a) Dow, T.E. and Benjamin E. (1975): "Demographic Trends and implications." In J. C. Caldwell (ed): Population Growth and Socioeconomic Change in West Africa. New York, Columbia University Press. This study uses a 1969-70 sample survey conducted by Dow and supplementary information from national censuses and official publications to describe the demographic dynamics, knowledge, attitude and practice of family planning, the demographic and social implications of population growth, as well as government and university activities in the field of population.

The 1969-70 survey according to the author covers a sample of 5,952 females aged 15-49 "either currently married or single with children; it excludes single women not currently married. Considering the observed and estimated distribution of these different marital status in Sierra Leone, it can be said that the sample is representative of approximately 92 percent of the total urban female population aged 15-49, and approximately 96 percent of the total rural female population aged 15-49."


This is a study conducted jointly by Sierra Leone Health Ministry and the WHO. It utilizes data from field surveys as well as health service records and information from the vital registration system. The field surveys include retrospective and prospective surveys covering 3,229 households and 15,055 people drawn from some urban and suburban parts of Freetown as well as rural population from both the Western Area and the Northern Province. These area surveys are "not intended to be representative of the country as a whole, nor of any particular part of it. In fact the methodological feature of the study and the various limitations... made it necessarily a purposive choice which would ensure completeness of coverage, adequate cooperation and accessibility throughout the year." In addition to the main field surveys, data from five special surveys were built into the program. These were comprised of medical and laboratory follow-ups; collection of anthropometric data; record matching; correction of survey records with those of December 1974 national census; and the taping of interviews.

c) Stiles, Rebecca A. (1982): Induced Abortion in Sierra Leone, West Africa - With Special Emphasis on Adolescent Fertility. Graduate Research Paper, Department of Maternal and Child Health, University of North Carolina, Chapel Hill. (Mimeo)
This is a descriptive study of women, particularly adolescents, who came to Princess Christian Maternity Hospital, Freetown, Sierra Leone, to receive medical treatment for their reproductive needs. Special attention was paid to adolescents who had spontaneous abortions, had induced abortions outside the hospital and those who requested and underwent induced abortion in the hospital; their characteristics, obstetrical history, contraceptive use before and after abortion and medical complications.

The sample population was drawn from women who used the services of the hospital from November 1980 to September 1981. It involved a total of 5547 patients comprising 4897 who presented for delivery; 207 treated for spontaneous abortion; 337 treated for induced abortion; and 16 treated for abortions induced outside the hospital. The women are "a self-selecting group of individuals and may not be reflective of the larger proportion of women who chose to deliver at home with the assistance of the traditional birth attendant."

d) In addition to the studies described above a number of research papers and studies have been prepared which throw some light on adolescent fertility. Only the main findings and conclusions were available to the author. However, almost all of them could be obtained from the following establishments in Sierra Leone:


2) Ministry of Education.


5) Central Statistics Office.


b) "Mortality Levels and Differentials in Sierra Leone: An Analysis of the Mortality Data from the 1974 Population Census of Sierra Leone. Census Analysis Vol. 2." (Feb. 1980)

c) "Fertility Levels and Differentials in Sierra Leone, Census Analysis Vol. 3." (Sept. 1980)
6) Demographic Research Unit, Fourah Bay College.

7) Institute of Education, University of Sierra Leone.

8) Departments of Home Economics and of Geography and Environmental Studies, Njala University College.

9) Sierra Leone Home Economics Association.

10) Planned Parenthood Association of Sierra Leone.
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Planned Parenthood Association of Sierra Leone. 1977 Annual Report (Mimeo)


ADOLESCENT FERTILITY IN SIERRA LEONE: HEALTH AND SOCIAL IMPLICATIONS

Adolescence is a critical period of biological and psychological change. For the 602,000 youth between the ages of 15 and 24 in Sierra Leone, the biological change is liable to coincide with social transitions and stresses. As the number of sexually active adolescents in Sierra Leone grows rapidly, so do their needs regarding reproductive information, health care and family planning. This Executive Summary will survey findings in three areas that affect the long-term welfare of individual adolescents and society as a whole in Sierra Leone:

- The 602,000 youth aged 15-24 make up about 18 percent of Sierra Leone's population.

- Like the overall population, the number of young persons in Sierra Leone is growing at a very fast pace. The Sierra Leone National Population Commission projects that the size of the population aged 15-24 will reach 877,000 by the year 1999, a 46 percent increase in 15 years.

- Sierra Leone's adolescent fertility is among Africa's highest. A 1973 study reports that the fertility rate for teenagers in the 15-19 age group is 212 births per 1,000 women while among the 20-24 age group it is 279 births per 1,000 women, the highest fertility rate for any age group in Sierra Leone.

- Another study conducted in the early 1970s shows that over 70 percent of women aged 15-19 are already married, a figure exceeded in only four other African countries.

Demographic Profile of Youth

- The health risks to both mother and child when adolescent pregnancy occurs.
- The suspected high incidence of sexually transmitted diseases (STDs) among youth, particularly in urban areas.
- The social and economic disadvantages inflicted on young parents when they have an unwanted pregnancy, leading to an increase in illegal abortions, rising school drop-out rates and other long-term adjustment problems.

Sierra Leone's Age Structure in 1984 and 1999

High Adolescent Fertility

- The proportion of adolescent women in the reproductive age group is substantial and growing. Women aged 15-24 make up 39 percent of the total childbearing population.

- Women marry at very young ages in Sierra Leone. Although there has been a slight increase in marriage age in recent years, the latest available data indicate that the mean age at first marriage for women is 16.

- In countries like Sierra Leone where young couples are pressured by both family and society to have children during the first year of marriage, there is a strong correlation between early marriage and the high level of adolescent fertility.

- Mothers in the 15-19 age group account for 17 percent of Sierra Leone’s total fertility, one of the highest rates in the world.

- While most births occur within marriage, 0.7 percent of all live births occur to women who have never been married. The bulk of these unmarried mothers are in the 20-24 age group.

- Adolescent fertility is even higher in cities than in rural areas, despite the tendency toward small family norms brought about by urbanization. In Sierra Leone this tendency has been outweighed by a weakening of traditional methods of fertility regulation (such as postpartum abstinence and breastfeeding) combined with improvements in health and nutrition which have increased fertility.

- Despite recent increases, contraceptive use among sexually active adolescents remains low.

Health Risks of Early Pregnancy

- The risk of pregnancy-related death and sickness is very high for adolescents and their children. A study of over 5,000 patients at Freetown's Princess Christian Maternity Hospital found that "young women under age 20 had substantially more risk of poor pregnancy outcomes, maternal mortality, and neonatal mortality" than the older age groups. Three of the six maternal deaths which occurred during this study were among teenagers aged 15-17.

- Other studies show that women aged 15-24 account for almost 40 percent of all pregnancy-related complications in Sierra Leone, with most occurring among those under age 19. The 15-24 age group also accounts for about half of all urinary and genital tract infections during pregnancy.

- Early pregnancies pose special health risks for the child as well as for the mother. Anemia and other pregnancy disorders in young women not only increase maternal mortality, they also cause low birth weight and increase the chance of infant death. The risk is compounded if the young mother continues to have more children.

- While pregnancies to women under 18 are considered high risk all over the world, the condition is more life-threatening in countries like Sierra Leone where it is coupled with malnutrition, poor living conditions and insufficient medical care contribute to general health problems.

- As in most countries, maternal and child health services in Sierra Leone usually do not provide for the special needs of adolescents. As a result, many adolescents do not attend prenatal clinics or they delay seeking health care, thereby increasing their risk of developing complications.

![INFANT MORTALITY AND AGE OF MOTHER](chart.png)

POLICY CONSIDERATIONS AND QUESTIONS

Conducting Needed Research

- In Sierra Leone, virtually no research has been conducted on adolescent fertility, although a 1982 Freetown study concluded that adolescent sexual activity appears more widespread than previously acknowledged.

QUESTION: SHOULD ADDITIONAL RESEARCH BE SUPPORTED TO GAIN BETTER KNOWLEDGE ABOUT ADOLESCENT SEXUAL BEHAVIOR, HEALTH RISKS OF EARLY PREGNANCY, ABORTION MORTALITY, STD RATES, ETC.?

Expanding Sex Education and Family Life Education

- While Sierra Leone enjoys an extremely popular program of population and family life education, sex education and education on human reproductive health is rarely provided.

- Even the population and family life education program covers only the in-school population. With only 39 percent of primary school age children and 12 percent of secondary school age children actually enrolled in school, this leaves the vast majority of young people without any formal family life education at all.

QUESTION: SHOULD PROGRAMS OFFERING SEX EDUCATION AND FAMILY LIFE EDUCATION BE EXPANDED TO REACH ALL ADOLESCENTS, BOTH IN AND OUT OF SCHOOL?

Providing Family Planning Services

- Family planning practice can contribute to the health of young men and women, yet family planning services for adolescents are not readily available in Sierra Leone. Government material and child health centers and the Planned Parenthood Federation of Sierra Leone provides services to a small proportion of the total population, but contraceptives are only available to women over 18 years of age.

QUESTION: SHOULD CLINIC SERVICES BE EXPANDED IN ORDER TO REACH THE LARGE PROPORTION OF ADOLESCENTS BELOW THE AGE OF 18 WHO RUN A PARTICULARLY HIGH RISK OF COMPLICATIONS FROM EARLY PREGNANCY?
Improving the Distribution of Contraceptives

- Oral contraceptives can be bought without prescription in Sierra Leone, but because of shyness, many young women will not approach a male pharmacist to obtain them.

**QUESTION:** WHAT IMPROVEMENTS CAN BE MADE IN THE RETAIL DISTRIBUTION OF ORAL CONTRACEPTIVES TO MAKE SURE THEY REACH THE ADOLESCENT IN NEED OF FAMILY PLANNING?

Preventing Repeat Abortions

- Contraceptive use increases dramatically after induced abortion. In one study, the proportion of adolescents under age 20 who had never used contraception declined from 71 percent to 17 percent and among those aged 20-24, from 66 percent to 15 percent.

**QUESTION:** SHOULD SPECIAL PROGRAMS TO EDUCATE YOUNG PEOPLE ABOUT FAMILY PLANNING BE PART OF A CAMPAIGN TO REDUCE THE INCIDENCE OF ABORTION?

Reducing High Risk Pregnancies by Delaying Marriages

- The relationship between early marriage and high adolescent fertility is very strong in societies like Sierra Leone where the overwhelming majority of young brides do not practice contraception and where there is family and social pressure to reproduce within the first year of marriage.

**QUESTION:** SHOULD A LEGAL MINIMUM AGE OF MARRIAGE BE INSTITUTED?

Safeguarding Social and Economic Prospects for Adolescents

- Since the early 1970s the main criteria for acquiring higher social status and prestige have been slowly changing from lineage, seniority and childbearing to those of education and occupation, particularly in the urban areas. The interruption of formal education by an unwanted pregnancy jeopardizes future prospects for social and economic advancement.

**QUESTION:** WHAT PROGRAMS SHOULD BE INSTITUTED TO ENCOURAGE PREGNANT STUDENTS AND ADOLESCENT MOTHERS TO STAY IN SCHOOL OR ACQUIRE VOCATIONAL SKILLS?
Sexually Transmitted Diseases

- Sexually transmitted diseases (STDs) are a leading cause of miscarriage, infertility among both men and women, and blindness in newborns.

- In Sierra Leone’s 1979 Health Service Report gonorrhea came third after malaria and worm infestation in the total number of new outpatient cases treated by the health service.

- STDs not only diminish the health of individuals, they also are a drain on national resources in such areas as health care expenditure and lost productivity.

- Published data indicate that STD rates among students at the University campus are high though falling. In 1976, 25 percent of all students had acquired at least one type of STD. This rate is reported to have dropped to 19 percent in 1980 and 16 percent in 1982.

- Sexually transmitted diseases are believed to constitute a serious public health problem, particularly since they are beginning to show some resistance to the inexpensive antibiotics most commonly used for treatment.

- Some believe that there is a growing trend toward sexual permissiveness among youth in many African countries like Sierra Leone. Increased sexual activity at early ages could contribute significantly to the incidence of STDs, particularly in light of other factors such as urbanization and the breakdown of traditional family units.

- Inadequate treatment of sexually transmitted diseases by untrained practitioners contributes to the spread of these infections.

Preventing Abortions

- Induced abortion, which was virtually unknown in traditional society, seems to be increasing among adolescents in Sierra Leone. Early, unwanted pregnancies among adolescent women contribute substantially to the incidence of abortion.

- Although hard evidence is difficult to obtain, available data show that the incidence of abortion among adolescents is high. Adolescents aged 15-19 account for 23 percent of all abortions, most of which are illegal, while those aged 20-24 account for 21 percent. Of women who obtain legal abortions, over 80 percent are in the 15-24 age group.

- Over half of all illegally induced abortions are septic. Abortions are a major cause of maternal death in Sierra Leone, resulting in 11 percent of maternal deaths in two Freetown hospitals. Next to anemia, abortion is the most prevalent complication of pregnancy and puerperium in the general population.

Abortion Among Adolescents in Sierra Leone

TOTAL ABORTION CASES

Social and Economic Consequences of Early Pregnancy

- The social and economic disadvantages of early childbirth for both mother and child are enormous; and they are aggravated if the young mother is unmarried and the child is born out of wedlock.

- When unwanted pregnancies result in forced or premature marriages, both parents may be overburdened with financial and emotional responsibilities they are ill-equipped to assume.

- The problems that accompany unwanted pregnancies are especially acute for the poor. The very poor and very young parent is likely to be severely overburdened. When children suffer from malnutrition, infections, parasites and lack of learning, their physical and intellectual development will probably be retarded in adolescence. Adolescent pregnancy increases the risk that this pattern will be repeated in the next generation, thus establishing or reinforcing the cycle of deprivation.

Like most African countries, Sierra Leone does not encourage school attendance among married adolescents or teenaged mothers. Therefore, once a student finds herself pregnant, the usual course of action is for her to drop out of school or face dismissal. Most of these young women are denied the opportunity to develop their full potential for social and economic advancement. The consequences may be equally devastating for young males who father children.

<table>
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<tr>
<th>Country</th>
<th>Year</th>
<th>Total Fertility Rate (TFR)</th>
<th>Mean Age at Marriage</th>
<th>Fertility Rate Per 1,000</th>
<th>Contribution (%) to TFR</th>
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