

## BACKGROUND TO THE CONTRACEPTIVE PREVALENCE SURVEY (CPS) IN SRI LANKA

### INTRODUCTION

The Sri Lanka Contraceptive Prevalence Survey (CPS) is a national sample survey designed to obtain information on contraceptive use and fertility. This survey was conducted in 1982 by the Department of Census and Statistics, Ministry of Plan Implementation, in collaboration with the Westinghouse Health Systems of Columbia, Maryland, U.S.A.

The Department of Census and Statistics through the CPS has obtained and tabulated data on levels of fertility, knowledge, use and availability of contraceptives for the entire island as well as for urban-rural areas. These data have been obtained by interviewing a nationally representative probability sample of about 4,500 ever-married women in the age group 15-49. The interviews were conducted by rigorously trained female interviewers of the Department of Census and Statistics under careful supervision. The field work lasted a period of approximately two months from February to March 1982. Findings from the survey on a preliminary analysis were presented and discussed at a seminar held in Colombo on 4th August 1982.

### Long Term Objectives

- (a) Obtain for Sri Lanka, data on contraceptive behaviour for planning and evaluating the country's family planning programmes.
- (b) Establish Contraceptive Prevalence Surveys as an evaluation tool for increasing the efficiency, effectiveness, and reliability of family planning programmes.

### Short Term Objectives

- (a) Collect for Sri Lanka, a body of data to ascertain the knowledge and the use of contraceptive practices and the current availability of contraceptives.
- (b) Obtain information on the relationship between selected population characteristics and contraceptive knowledge and use.

### DESCRIPTION OF SRI LANKA

#### Geography

The pear-shaped island Republic of Sri Lanka, earlier known as Ceylon, is situated at the southern tip of India between northern latitudes  $5^{\circ} 55'$  and  $9^{\circ} 50'$  and eastern longitudes  $79^{\circ} 42'$  and  $81^{\circ} 52'$ . It is separated from India by a 22 mile stretch of sea known as Palk Strait. The island spans a land area of 65,608 sq.kms. The physical features (See Map 1.1) of the island can be described in terms of 3 distinct areas: (a) mountainous region covering the southwest and central parts of the island ranging in elevation between 900 to 2,100 metres, where most of the tea and rubber plantations are situated; (b) a coastal belt which extends along the northern and eastern part of the island to form an extensive flat plain where most of the paddy is cultivated under major irrigation areas; (c) an intermediate upland region between these two areas surrounding the central hills having an elevation of 300 - 900 metres. Climatically the country is divided into three zones: Wet Zone, Intermediate Zone, and Dry Zone. The Wet Zone covers the southwestern part of the island and receives an average annual rainfall of about 250 - 500 cms.; the Dry Zone

covers the north central, eastern and south-eastern parts of the country and has a rainfall of less than 200 cms.; the Intermediate Zone is situated between these two areas and receives an intermediate rainfall.

### The Economy

The economy of Sri Lanka for over a period of 100 years until the middle of this century has been described as a typical dual economy where a modern sector co-existed with a traditional sector. The modern sector consisted of three large commercial plantations - tea, rubber, and coconut grown mainly for the export market while the traditional sector consisted of peasant subsistence cultivation of paddy, other minor food crops, and traditional crafts. During the nineteenth century, foreign capital mainly from England and immigrant labour from South India played a major role in the development of the tea and rubber plantations in the hill country and the development of financial and commercial institutions and the infrastructure for these commercial activities, which were mainly in the Wet Zone. The traditional sector was, however, essentially located in rural villages in both the Wet and Dry Zones. These two sectors differed considerably from each other and there was no economic interrelationship between the two sectors. However, since independence in 1948 the Government of Sri Lanka attempted to diversify the economy in order to relieve the heavy dependence on export crops and to integrate the economy by eliminating its dualism.

Systematic peasant settlement schemes in the Dry Zone connected to the restoration of ancient irrigation tanks and channels have been launched since the 1930s. At present, a massive settlement scheme based on the Mahaweli Development Project is in progress. Since 1977, the industrial development projects of the Free Trade Zone and the liberalization of the economy have brought about revolutionary changes. However, agriculture continues to be the main base of the Sri Lanka economy. Currently, it provides direct employment to about 47 per cent of the labour force.

### Population

Sri Lanka is fortunate in having reliable demographic data for a considerable period of time: The main sources of information are the periodic censuses and the vital statistics collected by the Registrar General. In recent years, sample surveys also have become a major source of demographic data. In the last few years, the Department of Census and Statistics and the Registrar General's Department have built up an efficient machinery for the collection and analysis of population data and vital statistics on a regular and systematic basis to meet the needs of policy makers and other users. The adequate availability of demographic data for Sri Lanka is well illustrated in Irene Taeuber's (1972) reference to the Country as a "demographic laboratory".

The first Census of Population, in the modern meaning of the term, was taken in 1871. Since then Censuses were taken at almost decennial intervals. However, the economic depression of the 20s and 30s restricted the 1931 census taking to a head count outside Colombo City and a detailed enumeration within the city limits. Again, due to the Second World War, a census was not taken in 1941 and this was done only in 1946. Since then four more censuses have been held in the years 1953, 1963, 1971 and 1981. Thus, among the developing countries, Sri Lanka could be said to have a proud history of over one hundred years of census taking.

The Department of Registrar General is responsible for supervising and superintending the registration of births, deaths and marriages occurring in the island. Although, according to the law of the land, registration of births and deaths is compulsory, some events escape registration. Of particular importance is the case of infants who die immediately after birth where both births and deaths may escape registration. However, Sarkar (1957) has estimated a birth registration rate of 96.0 per cent for the entire population for the period 1930 to 1950. In July 1968, at a Seminar held in

Colombo, the view was held that Sri Lanka was amongst those countries in which registration was virtually complete.

### Population Growth

Data from the census and vital registration records provide a fairly complete pattern of population growth in Sri Lanka from 1871. The growth of Sri Lanka's population during the last 110 year period has not been uniform. The annual rate of growth of the population during the years prior to World War II fluctuated between 0.9% and 1.7%. After the war, the popula-

tion growth showed a sudden rise to 2.8% during the period 1946 to 1953; thereafter, from 1953 to 1963, the average rate of growth continued to be high at 2.7% but showed a drop to 2.3% from 1963 to 1971 period and a further drop to 1.7% during the period 1971 to 1981.

### Population Distribution

For purposes of administration, the island is divided into 24 districts. The distribution of population and its density in these districts in 1981 is shown in Table. 1.

Table 1.1 DISTRIBUTION AND DENSITY OF POPULATION BY DISTRICTS, 1981.

Density	Population	Density Persons/Km <sup>2</sup>
Colombo	1,698,322	2,600
Gampaha	1,389,490	993
Kalutara	827,189	515
Kandy	1,126,296	522
Matale	357,441	179
Nuwara Eliya	522,219	363
Galle	814,579	487
Matara	644,231	516
Hambantota	424,102	164
Jaffna	831,112	401
Mannar	106,940	53
Vavuniya	95,904	36
Mullaitivu	77,512	39
Batticaloa	330,899	134
Amparai	388,786	86
Trincomalee	256,790	98
Kurunegala	1,212,755	254
Puttalam	493,344	166
Anuradhapura	587,822	82
Polonnaruwa	262,753	77
Badulla	642,893	228
Moneragala	279,743	50
Ratnapura	796,468	246
Kegalle	682,411	410
Sri Lanka	14,850,001	230

Source: Department of Census and Statistics. (1982). *Census of Population & Housing, 1981. Preliminary Release No. 1.*

About half of the country's population is concentrated in the southwest part of the island in the contiguous administrative districts of Colombo, Gampaha, Kandy, Kurunegala, Kalutara, Galle, Ratnapura, and Kegalle, all of which are in the Wet Zone. The land area of these eight districts constitutes only 20% of the total land area of the island. As seen in the Table, Colombo is the most densely populated district. It has a density of 2,603 persons per square kilometer, a density nearly 3 times that of the next most populous district, Gampaha. Generally, the southwestern coastal and hilly districts and the northern tip district of Jaffna are the high density areas. The density thins down towards the eastern coastal area and north central areas. In the sparsely populated northern districts, the limits are below 100 persons per square kilometer.

According to the ten per cent advance tabulations of the 1981 Census, 3,194,479 persons live in urban areas. An urban area for census purposes is a local authority area administered by a Municipal Council, Urban Council or Town Council. Although past Censuses have shown that the proportion of the population that is urban had been slowly increasing, the percent urban in the 1981 Census (21.5%) indicate a decline from that at the 1971 Census (22.4%).

#### Ethnic Composition

Sri Lanka is a country with a multiracial population. Its population consists of a combination of six ethnic groups: Sinhalese (74.0 per cent); Sri Lanka Tamils (12.6 per cent); Indian Tamils (5.6 per cent); and Moors (7.2 per cent). Burghers, Malays, and others constitute the rest. Most Sinhalese are Buddhists; most Tamils, Hindus; Moors, exclusively Muslims; and Burghers, Christians.

The ethnic and religious groups are fairly clearly differentiated and somewhat localized in distribution. For instance, the Sri Lanka Tamils live mainly in the Northern Province, in

the Districts of Jaffna, Mannar, Vavuniya, Mullaitivu, and Trincomalee, while the Indian Tamils are largely confined to the estate areas of the hill country in the Central and Sabaragamuwa Provinces, and in the districts of Kandy, Matale, Kegalle, Ratnapura, Nuwara Eliya, and Badulla. However, the Moors, unlike the Tamils, are spread all over the country with a concentration in the districts of Amparai, Trincomalee, Mannar, and Batticaloa. The Sinhalese are the majority in almost all districts except those in the Northern Province.

#### FAMILY PLANNING POLICY AND ACTIVITIES

The Family Planning Association of Ceylon (FPA) was established in 1953, although family planning activities had started earlier in the country. The Government recognised immediately the work of this voluntary organization by giving a grant in 1954, which was increased substantially in 1958. In the same year, the Government further demonstrated its acceptance of the importance of family planning in the country by entering into an agreement with the Royal Government of Sweden to arrange a pilot project in community planning. This project which commenced in June 1958 was designed - (a) to investigate attitudes to family planning; (b) to assess future prospects for family planning; and (c) to assist in training public health staff in family planning.

This pilot project showed that family limitation could be achieved to a satisfactory level by methods acceptable to the people within a reasonable period of time. 1965 was a landmark year in that family planning was accepted as an integrated part of the maternal and child health services of the Government and a population policy for a low rate of population growth was adopted by the Government. In order to supervise, co-ordinate, monitor, and evaluate the family planning programme, a Family Planning Bureau was established in 1968/69, with a Statistician from the Department of Census and Statistics to strengthen the planning and moni-

toring of family planning activities.

The major sources of external assistance to family planning in Sri Lanka prior to 1973 were the Swedish International Development Agency, Ford Foundation, and OXFAM. In February 1973, the Government of Sri Lanka and United Nations Fund for Population Activities signed an agreement to provide assistance to Family Planning Activities.

In 1978 the Ministry of Colombo Group of Hospitals was established. The new Ministry is concerned with the planning, implementation, supervision, and administration of family health programs (including family planning activities) in close collaboration with the Ministry of Health and the Ministry of Plan Implementation. However, the Parliamentary Consultative Committee of the Ministry of Plan Implementation is responsible for the formulation and implementation of the national population policy.

At the time of the visit of the UNFPA Needs Mission in March 1980, a Seminar on Population and Development was arranged by the Ministry of Plan Implementation. At that meeting the present government policy on population and family planning was clearly stated by the Secretary of the Ministry of Plan Implementation as: "Firstly, the Government is concerned with the rate of population growth and its policy is to take all meaningful steps to curb unplanned growth of population. Secondly, with a view to controlling the population explosion the state will enhance the family planning services and provide financial incentives to individuals

who practice family planning. Thirdly, in the field of family planning, the emphasis of the Government will be in the field of service oriented programs to enable motivated couples and individuals to receive family planning services....."

The Secretary, Ministry of Plan Implementation at this Seminar set out four areas which differed from the family planning policy that prevailed before 1977 and after. They are firstly, improvements and co-ordination of the payment of Cash incentives to those undergoing sterilization. Secondly, leave incentives to be introduced to those undergoing voluntary sterilization<sup>1</sup>. Thirdly, financial incentives to be given to medical teams<sup>2</sup> that perform sterilization and fourthly, Income Tax Laws to be amended, so that tax payers cannot claim deductions for children.

An important achievement of this Seminar was the placement of family planning programs as a subject above party politics by the major political parties in Sri Lanka. Indeed the 1977/80 period constitutes another important landmark in the history of family planning in the island.

Apart from Family Planning Association there are two other non-Governmental organizations involved in Family Planning Activities. They are the Community Development Services (CDS) established in Colombo in 1978 and the Sri Lanka Association for Voluntary Surgical Contraception (SLAVSC) established in 1974 with its Head Office in Kandy.

#### 1. Incentive payment for Acceptors

1. Jan. 1980 to 30th Sept. 1980 - Rs. 100/= per acceptor.
2. 1st Oct. 1980 to 15th Feb 1981 - Rs. 500/= per acceptor.
3. 16th Feb. 1981 to 31st Dec. 1981 - Rs. 200/= per acceptor.
4. 1st Jan. 1982 onwards - Rs. 300/= per acceptor.

#### 2. Financial Incentive for Medical Teams

This scheme commenced in May 1979. A surgical team performing female sterilization is entitled to Rs. 65/= for every case and Rs. 35.50 for every male sterilization.

## FERTILITY LEVELS, TRENDS AND DIFFERENTIALS

Analysis of fertility has been based on the data from population censuses and the vital registration system and in more recent years on survey data particularly, the World Fertility Survey, 1975.

### Levels and Trends

The most commonly used measure of fertility is the Crude Birth Rate (CBR) defined as the number of births per year per 1000 population. The quinquennial averages of crude birth rate estimates for the period 1941 to 1978 are shown below.

Period	CBR
1941-45	36.6
1946-50	38.9
1951-55	38.1
1956-60	36.5
1961-65	34.3
1966-70	31.1
1971-75	28.7
1976-80	28.1

Source : Department of Census and Statistics. *Bulletin on Vital Statistics* and Registrar General's *Report on Vital Statistics* for various years.

These figures show that there had been a decline in the crude birth rate since the late 1950's.

A more refined measure of fertility is the total fertility rate (TFR) which can be interpreted as the total number of births a woman would have during her reproductive years under the existing fertility regime. TFR for the 1960 to 75 period obtained in an analysis of fertility trends (Alam and Cleland, 1981) from the WFS data are shown below.

Period	TFR
1960-61	5.50
1961-62	5.28
1962-63	5.28
1963-64	5.24
1964-65	5.05
1965-66	4.95
1966-67	4.78
1967-68	4.62
1968-69	4.61
1969-70	4.41
1970-71	4.22
1971-72	3.98
1972-73	3.68
1973-74	3.58
1974-75	3.58

Source: Alam and Cleland. (1981). *Illustrative Analysis: Recent Fertility Trends in Sri Lanka*. WFS Scientific Reports No. 25.

It can be seen that the decline in TFR was modest at first but accelerated later. During the ten year period 1963 to 1974 it dropped from 5.3 to 3.6. The average annual rate of decline in the TFR for the period 1963-74 which according to these data is 3.9 per cent (it is slightly lower. 3.4 per cent, when computed from registration data) accelerated to 4.5 per cent during the period 1971 to 74.

Prior to early 1960's, fertility of the age groups beyond 25 years had remained unchanged. Declines were observed, however, for the younger age groups of 15-19 and 20-24 which were certainly due to rising age at marriage. Since mid 1960's substantial declines are observed at all ages.

Many studies have been carried out to investigate this changing levels of fertility based on cross sectional data from Censuses and the registration system. (Jayawardene and Selvaratnam, 1967; Wright 1968, Fernando 1970, 1972, 1974, 1980, Alam and Cleland 1981).

In Sri Lanka child bearing takes place within marriage and hence fertility levels are determined by two factors, namely, proportion of married

women in the population of child bearing years and the fertility of married women. Over the period 1963-71 the larger contribution to the decline in TFR (59%) has been the changes in the proportion of married women resulting from a rising trend in age at marriage, but in the 1971-75 period this contribution reduced to 46%. Thus, the pattern of fertility decline in Sri Lanka is similar to what has been observed in most other Asian countries rising age at marriage is the factor that initiated the fertility decline; later marital fertility too began to fall and made a gradually increasing contribution.

### Differentials

Studies on fertility differentials, unlike those on trends, have been few and limited in scope until recent years when fertility surveys were conducted. They are also limited to discussions of differentials across variables regardless of possible inter-variable correlations.

Although no clear and consistent results have emerged from the early studies, some consistent observations have been recorded. Estate women have had lower fertility levels than urban or rural women. Education has consistently shown an inverse negative relation with fertility. Ethnic grouping and Religion have also been seen as a strong differentiator of fertility. Another consistent observation over time has been that among all groups, Moor (Muslims) have had the highest fertility levels.

A more detailed study (Little and Perera, 1981) has analysed the fertility differentials of three marriage cohorts in WFS sample by controlling for the additive effects of intervariable associations. The findings can be summarised as follows.

- (a) Age at marriage has had a strong influence on marital fertility, the effect being stronger the later the age at marriage. This influence could not be attributed to the socio-economic status of late marrying women but rather a large part of differentials in socio-economic variables was attributable to variations in age at marriage.

(b) Hardly any differentials existed in early marital fertility i.e. within the first ten years of marriage.

(c) Differentials emerged with advancing marriage duration and considerable differentials existed in fertility of the second ten years of marriage. The patterns of differentials by region of residence and ethnic group/religion had changed over time but the pattern by education (both respondent's and husband's), occupation, and standard of living had remained largely unchanged.

(d) The reason for the changing pattern of regional and ethnic differentials had been the differential decline of fertility among sub-groups of these variables.

(e) The differentials were equally large by both respondent's education as well as husband's education and they were mainly attributable to variation in age at marriage. Significantly, respondent's education was no more closely associated than husband's education with the level of fertility.

These findings reinforce the findings from Alam and Cleland's study of fertility trends of sub-groups of the population measured as duration specific marital fertility rates for the period 1960 to 1975. The per cent decline in marital fertility between 1960-65 and 1970-75 for various sub-groups of the population are shown in Table 1.2. Fertility decline is shown as the per cent decline during the period in duration-specific fertility rates cumulated to duration 20, which may be interpreted as the average number of births a married woman had during the first 20 years of marriage under the marital fertility levels at the time.

The most important finding presented in this table is the relatively uniform declines across categories of educational, occupational and urban rural categories of the sample. This

Table 1.2. PER CENT DECLINE IN DURATION SPECIFIC MARITAL FERTILITY RATES CUMULATED TO 20 YEARS FOR SUB-GROUPS OF POPULATION 1965-65 TO 1970-75

Sub-Group	Per cent Decline
<b>Region of Residence</b>	
Zone 1	28
Zone 2	23
Zone 3	21
Zone 4	10
Zone 5	8
Zone 6	22
<b>Type of Residence</b>	
Urban	23
Rural	20
Estate	22
<b>Race/Religion</b>	
Sinhalese Buddhists	24
Tamil Hindus	8
Moor Muslims	10
Christians and Others	19
<b>Education</b>	
Both less than 6 years	18
Husband 6 + years    Wife less than 6 years	12
Husband less than 6 years    Wife 6 + years	18
Both 6 + years	28
<b>Occupation</b>	
White Collar	33
Sales & Service	19
Self Employed Agriculture	13
Agricultural Employee	16
Skilled Manual	23
Unskilled Manual & Household	19

conforms to the observation cited earlier that differentials by these variables had similar patterns across cohorts of all marriage durations. In contrast, differentials by region of residence and ethnicity/religion groups have changed because of differential decline. The Table shows that Moors and Sri Lanka Tamils and residents of zones 4 and 5 have experienced relatively little declines compared to Sinhalese, Buddhists and Christians or the residents of other regions. This observation too adds credence to the same inference drawn in the previous study.

The above findings indicate that the cultural factors associated with ethnic group and religion and also region of residence have played a more important role than the socio-economic factors of type of place of residence, education and occupation in determining the fertility differentials in the country.

#### MORTALITY

The course of mortality in Sri Lanka can be described as one of a slow downward trend up to 1946, a precipitous fall from 1946 to 1947 followed by a continuing decline at progressively slower rates. At the turn of the century the country's crude death rate was as high as 29 deaths per 1000 population. In 1946, it had dropped to 19.8 from which it fell dramatically to 14 in the following year. The downward trend in crude death rate continued to reach 6.6 per thousand in 1978. The decline in mortality is also seen in the impressively rapid improvements in the survival chances of the people. Life expectancy at birth increased from a very low level of 33 years to 63 years for males and from 31 years to 66 years for females during the span of half a century between 1921 and 1971.

The phenomenal drop in mortality levels in the immediate post-war years have been attributed to several factors: the island-wide Malaria eradication campaign launched at the

time, extension of medical and public health services, improved nutrition and economic conditions. (Meegama, 1967, 1969; Newman, 1965, 1970; Fredrickson, 1960, 1966; Grey, 1974).

In recent years mortality levels have stabilized around levels above the minimum levels attained in developed countries. Mortality has even risen among adult males, and infant mortality is still high compared to rates attained in developed countries being about 45 per thousand births.

The pronounced inter-district differentials in mortality disappeared when it fell from high to low levels in the post-war years. In recent years, however, wide differentials between socio-economic classes have been noted particularly in neo-natal, post neo-natal and adult male mortality. (Meegama, 1980).

#### SUMMARY

It is important to be familiar with the climate, geography, ethnicity, and economy of Sri Lanka in order to understand the results of the CPS/SL. The historical and demographic trends and differentials mentioned here, set the stage for examination of the current fertility as measured by the CPS and the extent of family planning practice, which could alter the demographic future of the island. In the following Chapters we discuss the findings of the survey on levels and trends of fertility, patterns and trends of contraceptive knowledge and use, and availability of family planning services.

Wherever possible these results are compared with those of the World Fertility Survey, 1975 both as a measurement of changes over time and as a validation of data. The data of the World Fertility Survey presented in this report are from the First Country Report (Department of Census and Statistics, 1978) unless otherwise stated.