

1. BACKGROUND

1.1 GEOGRAPHY, CLIMATE, AND ECONOMY

The Republic of Botswana, 582,000 square kilometres in size, lies at the centre of the Southern Africa Plateau at a mean altitude of 1,000 meters above sea level. Formerly the Bechuanaland Protectorate, it is bounded by the Republic of South Africa, Namibia, Zambia and Zimbabwe.

The climate of Botswana is semi-arid. Temperatures are very high in summer and low during winter nights, often reaching sub-zero levels. Winter days are mild. Rainfall is seasonal with uneven distribution. Most rivers flow seasonally, except in the Northwest District where the major rivers are perennial. Ground water exists at varying depths in most parts of Botswana. A sand-covered thirstland, named the Kgalagadi (Kalahari) Desert, comprises 84 percent of the territory of Botswana. The soil of the Kgalagadi is sandy and of poor quality; yet, this thirstland frequently sustains abundant vegetation which contrasts with the general absence of surface water.

The availability of water is a dominant factor influencing the pattern of settlement. Water is needed to support and sustain the growth of crops and grass, to supply mining and other industrial needs, and to meet the demands of human settlements. About 87 percent of the population lives in the eastern part of Botswana where rainfall is more regular, ground water is available, and the soil is relatively fertile.

Drought has become a frequent occurrence in the country, and severe drought from 1982 to 1988 resulted in declining agricultural production and farm income. The semi-arid climate limits the arable land to less than 5 percent of the total land area and is a serious constraint on agricultural production.

The exploitation of minerals also influences settlement patterns. Mineral prospecting is one of Botswana's principal industries. The results of the standard methods of prospecting and the more recent air survey methods have been positive. There are copper and nickel ores at Selibe Phikwe, silver ore near Francistown, manganese and traces of asbestos near Kanye, coal in Morupule and other places such as Kgaswe and, more importantly, diamonds at Orapa, Letlhakane and Jwaneng. Along the Ghanzi ridge, minerals such as asbestos, lead, zinc, and uranium may also be found. The mines and their associated activities--transport, power, communications, and the provisioning of the mine workers--are a major source of employment in Botswana.

Botswana's gross domestic product (GDP) at current prices, increased from an estimated 36.6 million pula in 1966 to 1277.1 million pula in 1983/84. Mining is the largest contributor to the GDP. Agriculture's contribution to the GDP has declined substantially over the years from 25 percent in 1973/4 to 5 percent in 1983/4, while that of the mining sector has increased from 23 to 48 percent over the same period.

1.2 POPULATION

The population of Botswana is relatively homogenous compared to countries of East and West Africa. When compared with nearby countries, such as Lesotho and Swaziland, however, it is more heterogeneous. Most of Botswana are Tswana speaking. There are also found in the country Bakalanga, Hambukushu, Bayei, Basarwa (with their various dialects), Baherero, Ovambo, people of European stock, and some Ndebele, Shona, Nama and other people from the neighbouring countries.

According to recent censuses, the population has grown rapidly from 515,833 in 1964 to 649,083 in 1971, to 967,363 in 1981. The growth rate was 3.1 percent during the period 1964-71 and 4.1 percent during the period 1971-81. The increase cannot be fully accounted for by changes in fertility and mortality, and may be due partly to under-enumeration in the 1971 census and hidden migration into Botswana during the 1971-81 inter-censal period. For example, fertility (measured by the crude birth rate) was estimated to be 48.7 per thousand, and mortality (measured by the crude death rate) was 13.9 per thousand during the inter-censal decade; the expected natural growth rate for this period would be 34.8 per thousand, instead of the 41.0 per thousand noted above. The natural growth rate of 3.48 percent per annum implies that the population will double every 20 years if the population continues to grow at the current rate. The total population for 1988 was estimated at 1.2 million.

One of the most critical aspects of this high growth rate is that it results in an unbalanced age structure, whereby the number of children (who are dependent) is nearly equal to the number of working age adults. A sustained high birth rate also leads to an increasingly larger number of children who require food, clothing, education, health services, shelter and future opportunities for employment.

The population of Botswana is distributed unevenly, with the highest concentrations in the southern and southeastern parts of the country and the lowest concentrations in the western and southwestern parts. The overall population density was 2.08 persons per square kilometre in 1988. The density varies from one region to another, being highest in the urban areas and lowest in rural areas. Within rural areas, localities with relatively good soil and water resources have a higher density than those with poorer resources. The population density has increased in all districts during the period 1971-81, though at different rates. In relative terms, only Kweneng District recorded a moderate increase (77 percent) while all other districts experienced gains in density in excess of 100 percent during the inter-censal period.

1.3 NATIONAL HEALTH PRIORITIES

When Botswana became independent in 1966, the Ministry of Health inherited a largely curative, urban health care system. Since then Botswana has adopted a primary health care strategy as the means for achieving health for all. Gradually, services have been altered to reflect this approach with an emphasis on prevention of disease and promotion of health. National health priorities, by order of importance, are listed in the National Development Plan VI (1985-91) as:

Primary Health Care,
Training and Manpower Development,
Planning and Statistics,
Hospital Services, and
Technical Support Services.

Under Primary Health Care (PHC), the Government's top priority, the expansion of services to reach all communities, especially those in the remote areas, is emphasized. More health posts are being staffed with enrolled nurses in order to increase the range of services that can be provided in these facilities on a daily basis. Another area of emphasis of the Botswana PHC programme is community participation and involvement. The training of family welfare educators receives considerable attention, as it is this cadre which is responsible for mobilizing communities to participate in health activities.

1.4 MATERNAL AND CHILD HEALTH/FAMILY PLANNING PROGRAMME

The maternal and child health/family planning (MCH/FP) programme is a major component of PHC; its tasks under the current National Development Plan include:

- Promotion of MCH/FP, with follow-up, and participation at the home level through the strengthening of family welfare educators in this area and data collection and use;
- Increased knowledge of and support for MCH/FP care which is effective, efficient, and acceptable at the community level;
- Identification of high risk groups among pregnant women, mothers, and children, and appropriate intervention;
- Protection of the health of mothers and infants through family planning services so that each family will be of a reasonable size, corresponding to its socio-economic and health conditions; and
- Continuation of the Expanded Programme on Immunization.

Maternal and child health/family planning services in Botswana originated in 1967, when several women in Francistown asked the Government Surgeon for contraceptives. These supplies were obtained from the International Planned Parenthood Association (IPPF) which subsequently began a pilot project in 1969 to introduce family planning in Serowe, a large village in the Central District. Six middle-aged women with children were trained as volunteer family welfare educators by an IPPF visiting team. In addition to human reproduction and family planning, the training included other subjects such as immunisations, breastfeeding, nutrition, child and maternal care, environmental sanitation, prevention of some major diseases and communication skills. Thus, from the beginning, family planning in Botswana has been integrated into the general context of maternal and child health and has never been a separate programme.

In 1973, the Maternal and Child Health/Family Planning (MCH/FP) Unit was formed in the Ministry of Health and a national programme was established. Family planning activities have been integrated into MCH services since the beginning of the national programme in 1973 because of their benefits to the health and welfare of families. The policy of the Government of Botswana affirms that these services be available to every family: "It is the basic right of every family to determine for itself how many children to have and when to have them. If couples are to exercise the choice of determining the number and spacing of their children, then public health agencies must provide them with the services, supplies and information on how to plan families" (Ministry of Health, 1976, p.i).

As a key component of the MCH/FP programme, it was decided to train 60 family welfare educators each year. Since 1973, more than 600 family welfare educators have successfully been trained by the MCH/FP Unit. Their role in the communities which select them is largely educational and motivational. In 1979, the Maternal and Child Health/Family Planning Unit joined with the Nutrition Unit and Health Education Unit to form the Family Health Division.

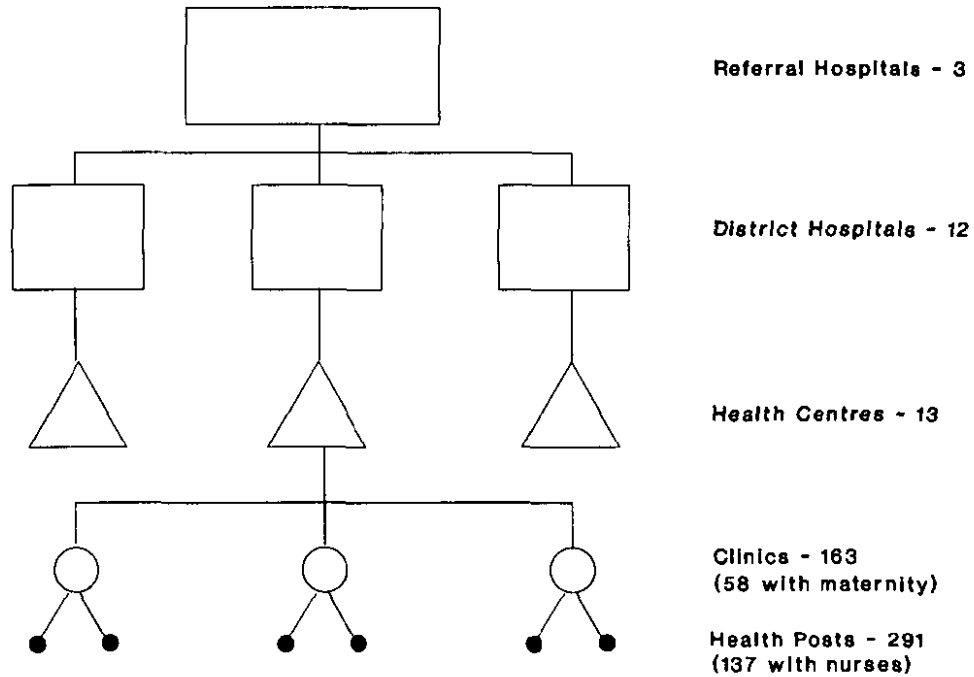
The main objectives of the Family Health Division are to reduce sickness and death among mothers, children and infants, to promote reproductive health, and to promote the physical and psychological health and development of children and adolescents. In order to achieve these objectives, health workers provide several services including antenatal care, supervised deliveries in health facilities, postnatal care, and family planning. They also vaccinate against infectious diseases, monitor the growth and development of children by periodic weighing and examination, supervise children's health in schools and encourage the community to participate in the health care of families.

MCH/FP services are available at all health facilities which provide curative and preventive care for the family. Since 1973, the number of service points has increased dramatically from 50 to more than 441 permanent facilities (see Figure 1.1). Emphasis has been placed on ensuring preventive care close to the predominantly rural population rather than on developing large, urban curative units. Participation is fostered through health education disseminated by home visits, school health education, village meetings, volunteer efforts, and the mass media.

Until 1984 family planning services were offered at only specified times during the week, as were child welfare, antenatal, postnatal, and other services. A typical mother would have to attend clinic sessions two to three times each month, once for antenatal services, again for child welfare services, and a third time for family planning services. In order to increase the accessibility of services, the MCH/FP Unit tested the integration of these services on a daily basis at several clinics late in 1984. From the initial pilot projects in two clinics in the Southeast District, integrated services have been extended to all parts of the country, such that today over 77 percent of clinics offer integrated services. With this approach, the entire family can obtain MCH/FP services on one day. Initial studies show that this approach has many advantages for both health personnel, service users, and the community.

The years after 1984 have seen an intensification of training in MCH/FP, both within and outside the country, with the aim of improving the quality of services. Many health workers have attended courses, seminars and workshops in the following areas of MCH/FP: integrated MCH/FP, counselling, contraceptive technology update, family planning clinical skills, family planning logistics,

**Figure 1.1
Health Care Pyramid**



Source: Medical Statistics Unit, 1989

family life education, fertility management, and maternal and child nutrition. Training has not been limited to service providers; National Health Institute (NHI) tutors have also received training. Furthermore, family planning has been integrated into the NHI curriculum.

Much progress has been made in reaching the populations in need of MCH/FP services, and many targets set in the 1979-1985 National Development Plan were met or exceeded by the end of the plan period.

For the current National Development Plan (NDP VI 1985-91), the MCH/FP targets are:

<i>Infant Mortality Rate</i>	<i>Below 50/1000 live births</i>
Women of reproductive age using modern methods of family planning	25%
Pregnant women attending antenatal clinics	98%
Supervised deliveries	70%
New-born babies with birth weight of at least 2500 grams	90%
Children under one year of age fully immunised	75%

In order to improve the quality and safety of family planning services in Botswana, the Family Health Division developed the Family Planning Policy Guidelines and Service Standards

in October 1987. These guidelines took effect in May 1988. The guidelines and standards, which were discussed at a national workshop and at interdistrict workshops held for most districts, have been welcomed by health workers. A clinical procedures manual for family planning has also been developed and is in final draft form. For a family planning programme to succeed there should be an uninterrupted flow of family planning commodities. To facilitate this, a drug and family planning logistics manual has been developed, and is nearing completion.

Information, education, and communication (IEC) is a very important component of any MCH/FP programme. Although many IEC activities in support of MCH/FP have been undertaken over the years, it is necessary to strengthen them further. In 1987, the Ministry of Health engaged a consultant to develop a three-year IEC programme to further promote MCH/FP activities. The design of this programme has been completed and--despite a shortage of manpower--implementation has started.

Teenage pregnancy continues to be a major concern in Botswana. In order to prepare teachers to teach family life education (FLE) to school children, two courses have been held, one for primary school teacher trainers and their education officers, and another for secondary school teachers and their education officers. The goal is for teachers and education officers trained in the two courses to form a core of trainees who, with support from the Family Health Division, will be responsible for training teachers in their areas. Already, district-level FLE workshops for teachers have been held in five districts.

1.5 POPULATION POLICY AND PROGRAMMES

In the past decade, key government officials, political leaders and chiefs have become concerned about the implications of rapid population growth in meeting overall development objectives. These concerns have been expressed through different media i.e. newspaper articles, speeches, and conference and workshop reports.

Key government officials have attended international conferences, where concerns about population and development were expressed, e.g., the Second African Conference on Population and Development held in Arusha, Tanzania in January 1984, the International Conference on Population held in Mexico City, Mexico in August 1984, and the All-African Population and Development Conference for Parliamentarians held in Harare, Zimbabwe. These conferences stressed the need for governments to develop population policies and implementation strategies.

In Botswana, workshops and conferences on population and development have been held to further sensitize policy makers on population and development matters. A seminar was held for policy makers and implementors in October 1985 to disseminate the results of the Botswana Family Health Survey of 1984. In September 1986, a conference on Population and Development for Parliamentarians and Chiefs was held. Another conference on the same subject was held for permanent secretaries and senior public officers in June 1987. These conferences called for the development of clear policies on population and development as well as teenage fertility. Also emanating from the conference for Parliamentarians and Chiefs has been the establishment of a National Parliamentary Council on Population and Development, whose mandate is to sensitize legislators and individual constituencies to population and development issues in the country. In

January 1989, the Government of Botswana created an Interministerial Programme Steering Committee on Population and Development to develop and implement a national population policy.

1.6 OBJECTIVES OF THE BOTSWANA FAMILY HEALTH SURVEY II

The Botswana Family Health Survey II (BFHS-II) was conducted on behalf of the Family Health Division of the Ministry of Health by the Central Statistics Office, through the Continuous Household Integrated Programme of Surveys. It was carried out as a sequel to the 1984 Botswana Family Health Survey and in conjunction with the second round of the 1987 Botswana Demographic Survey (BDS). Financial and technical assistance for the survey was provided by the Demographic and Health Surveys Programme at the Institute for Resource Development (IRD), under a contract with the United States Agency for International Development.

The objectives of the BFHS-II are to provide information on family planning awareness, approval and use, basic indicators of maternal and child health, and other topics related to family health. In addition, the BFHS-II complements the data collected in the BDS, by obtaining information needed to explore trends in fertility and mortality, and to examine the factors that influence these basic demographic indicators, particularly, the proximate determinants of fertility.

Specific objectives are:

- To collect information on fertility and family planning;
- To find out what type of women are likely to have more or fewer children or to use or not use family planning;
- To collect information on certain health-related matters such as antenatal checkups, supervised deliveries, postnatal care, breastfeeding, immunisation, and diarrhoea treatment;
- To develop skills in conducting periodic surveys designed to monitor changes in demographic rates, health status, and the use of family planning; and
- To provide internationally comparable data which can be used by researchers investigating topics related to fertility, mortality and maternal-child health.

1.7 BACKGROUND CHARACTERISTICS OF RESPONDENTS

The Botswana Family Health Survey II identified 4,648 eligible women and of these 4,368 women were successfully interviewed: 2,258 women residing in the urban areas and 2,110 in the rural areas. This section presents the distribution of the women interviewed for the BFHS-II by selected demographic and socioeconomic characteristics, as well as a comparison with the same information from previous sources as a measure of the quality of BFHS-II data. A description of the characteristics of the surveyed women provides a background for interpretation of survey findings for the report, while a discussion of the associations among some of the background variables is useful for an understanding of the data.

Table 1.1 Percent Distribution of Women 15-49 by Background Characteristics, 1981 Census, 1984 BFHS, and 1988 BFHS-II

Background Characteristic	1981 Census	1984 BFHS	1988 BFHS-II	Weighted Number of Women BFHS-II	Unweighted Number of Women BFHS-II
Age					
15-19	23.4	19.5	21.6	937	946
20-24	21.6	22.0	21.1	926	949
25-29	17.0	18.3	19.4	846	880
30-34	12.0	13.8	14.9	653	644
35-39	9.8	11.3	10.7	465	455
40-44	8.6	9.0	6.7	290	273
45-49	7.4	6.1	5.7	251	221
Union Status					
Never in union	54.1	29.0	52.9	2312	2283
Currently in union	40.8	65.1	39.0	1708	1734
Formerly in union	5.1	5.9	8.0	349	351
Residence					
Urban	21.2	23.6	30.1	1316	2258
Rural	78.8	76.4	69.9	3052	2110
Level of Education					
No Education	35.3	30.8	24.0	1045	899
Incomplete Primary	34.8	29.3	24.6	1073	1042
Complete Primary	21.1	24.0	25.5	1115	1164
Secondary or Higher	8.8	16.0	25.9	1135	1263
Total	100.0	100.0	100.0	4368	4368

Table 1.1 compares the age distribution of the women in the BFHS-II sample with the distribution of women 15-49 in the 1981 census and 1984 Botswana Family Health Survey (BFHS). The BFHS-II sample has a greater concentration of women at the ages 20-34 than the other two data sets. There is apparent under-sampling of teenagers in both the 1984 BFHS and the 1988 BFHS-II. An examination of the distribution of household members by age and sex enumerated in the BFHS-II household listing indicates a greater than expected number of women in the 10-14 age group for females and a dearth in the 15-19 age group. Some interviewers may have recorded women in the 15-19 year age group as having a younger age in the household listing in order to make them ineligible for the individual interview and thus lighten their work load. Similarly, it was also found that females in the 45-49 age group was under-enumerated relative to the 50-54 age group.

The greater concentration of women in the prime reproductive ages in the BFHS-II may also result from the fact that interviewers were more successful in interviewing women in selected households in the urban areas, where more young women are found. One consequence of the greater concentration of younger women is that estimates of contraceptive prevalence may be higher, and fertility lower, than if more older women had been interviewed.

The distribution of women by marital status in the BFHS-II is similar to that found in the 1981 census, whereas the 1984 BFHS classified a much greater proportion of women as currently in union. The 1984 BFHS included two additional probes to determine how many women reporting their marital status as separated, divorced, widowed, or single were actually living with a partner at the time of the interview. In response to these probes, almost half of the women who initially did not report themselves as married or in a consensual union said that they were currently living with a partner, resulting in a much higher estimate of the proportion currently in union.

Table 1.1 shows a rapid increase in the proportion of the Batswana population living in urban areas. The proportion of respondents residing in urban areas increased from 21 percent in 1981 to 24 percent in 1984, and rose to 30 percent by 1988. However, the BFHS-II may include a slightly greater proportion of urban women than is found in the population. There has also been a increase in the education of women in the 1980s. Only 30 percent of women 15-49 at the time of the 1981 census reported that they had completed primary school or higher, compared with more than 50 percent of women in the BFHS-II. In 1981, 35 percent of women of reproductive age had not attended any school; by 1988, only 24 percent had received no education.

The final two columns of Table 1.1 show the weighted and unweighted number of women. Weighting of data is necessary to compensate for differences in the selection probabilities and response rates. The weights are determined in such a way that the total number of weighted cases equals the total number of women interviewed. Therefore, for most of the sample, the weighted number of cases can serve as a rough guide for the actual number of cases. The main exceptions are when results are tabulated by the criteria used to define the sampling domains, in this case urban or rural residence, or any characteristics strongly associated with urban-rural residence. All results presented in this report are weighted and only the weighted number of cases is shown.

Table 1.2 shows the distribution of the surveyed women by education and according to age, urban-rural residence, and religion. Education is a major factor which determines the level of participation of women in the various sectors of the modern economy. Generally, women in Botswana play an active and significant role in the educational system both as students and as teachers. For the last ten years, female students have dominated the primary and junior secondary school system. However, this situation changes at senior secondary and higher levels of education.

The percent of women by education according to age cohort shows the increasing level of education among Batswana women. The percent of women with no education drops dramatically with decreasing age and, conversely, the proportion with at least completed primary schooling rises. As expected, urban women are better educated than their rural counterparts. The data also show variations in education by religion. Women who belong to the Spiritual-African Church, or profess to have no religion, have substantially less education than Catholic or Protestant women.

Table 1.2 Percent Distribution of Women by Education, According to Age, Urban-Rural Residence, and Religion, BFHS-II 1988

Background Characteristic	Education				Total	Number of Women
	No Education	Incomplete Primary	Complete Primary	Secondary or Higher		
Age						
15-19	5.5	19.6	37.1	37.8	100.0	937
20-24	15.3	16.8	32.4	35.5	100.0	926
25-29	29.5	18.7	27.3	24.5	100.0	846
30-34	34.5	26.3	18.9	20.3	100.0	653
35-39	34.5	35.6	17.9	12.1	100.0	464
40-44	33.2	45.4	8.5	12.9	100.0	290
45-49	47.8	42.3	2.0	7.9	100.0	251
Residence						
Urban	13.1	22.3	29.1	35.5	100.0	1316
Rural	28.6	25.5	24.0	21.9	100.0	3052
Religion						
Spiritual - African	24.1	26.7	28.1	21.1	100.0	1869
Protestant	15.1	23.2	24.2	37.5	100.0	980
Catholic	12.2	21.7	23.8	42.3	100.0	391
Other	6.4	19.3	15.2	59.1	100.0	50
No Religion	36.8	23.4	23.4	16.5	100.0	1075
Total	23.9	24.6	25.5	26.0	100.0	4368