(a) NATIONAL UNIVERSITY OF LESCING (b) Department of statistics (c) Demography unit-

70-74	.1	1.	WORKING PAPERS
65-69			IN DEMOGRAPHY
60-64			
55-59			
50-54			
45-49			
40-44			
35-39			4
30-34			
25-29			
20-24			
15-19	*********		
10-14	*********		
05-09	***********		
00-04			
	MALES	FEMALES	

FERTILITY IN LESOTHO: WHAT DO WE KNOW?

by Akim J. Mturi

Working Paper No. 27 January 1998

70-74		1.
65-69		
60-64		
55-59		
50-54		
45-49		
40-44		
35-39		
30-34	******	
25-29	***************************************	
20-24	***************************************	*********
	************	
15-19	*********	
10-14		
05-09		
00-04		
	MALES	FFMALES

WORKING PAPERS IN DEMOGRAPHY



#### FERTILITY IN LESOTHO: WHAT DO WE KNOW?

by Akim J. Mturi

Working Paper No. 27 January 1998

DEMOGRAPHY UNIT DEPARTMENT OF STATISTICS NATIONAL UNIVERSITY OF LESOTHO



## Acknowledgement

The spreadsheet used for the estimation of TFR was developed by Basia Zaba at the Centre for Population Studies, London School of Hygiene and Tropical Medicine. Discussion with Tiisetso Makatjane in various stages of writing this paper is appreciated and Ngoakoane Molise's comments on the draft of the paper were very useful.

# **Table of Contents**

1.	INTRODUCTION	1
2	LESOTHO'S NATIONAL CONTEXT	1
3	FERTILITY TREND: 1976-1996	3
	3.1 Population census estimates	3
	3.2 Estimation of fertility from national surveys	5
4	PROXIMATE DETERMINANTS OF FERTILITY IN LESOTHO	7
	4.1 Breastfeeding and Abstinence	7
	4.2 Marriage	9
	4.3 Contraception	10
	4.4 Separation of Spouses	11
	4.5 Induced Abortion and Sterility	11
5	DISCUSSION	12
6	FUTURE RESEARCH PRIORITIES	13
REFE	RENCES	14

### 1. Introduction

Until late 1980s it was still believed that fertility rates are highest in sub-Saharan Africa and there is no indication of a declining trend. However, analyses particularly those based on the Demographic and Health Surveys (DHS) data in late 1980s and 1990s have suggested that although fertility levels are still the highest in the world, a declining trend has been observed in several African countries. The most documented countries where fertility has started to decline are in eastern and southern Africa such as Kenya, Botswana and Zimbabwe. Kirk and Pillet (1998) have confidently suggested that "[t]he fertility transition is clearly under way in southern Africa..." (p. 2).

Compared with other countries in southern Africa, very little has been documented about fertility in Lesotho. This paper is therefore an attempt to fill this gap. During 1970s Lesotho had one of the lowest fertility levels in sub-Saharan Africa. Lucas (1992) argues that the relatively low level of fertility in Lesotho is due to childlessness and the absence of men, many of whom work in South African mines. Various data sources up to 1980s including the decennial population censuses of Lesotho suggest that fertility has remained almost constant in this country. Is this fertility trend true and does it apply to 1990s?

The main objectives of this paper are therefore to assess the fertility levels and establish the recent fertility trend (1976-1996) in Lesotho, and to give the likely explanation for the observed fertility trend. Data used come from the 1976, 1986 and 1996 population censuses of the Kingdom of Lesotho. Several national surveys are used to supplement the information obtained from the censuses.

### 2 Lesotho's National Context

The Kingdom of Lesotho is a small, mountainous and land locked country completely surrounded by the Republic of South Africa. The people of Lesotho (Basotho) are a homogenous group identified by one language called sesotho. Basotho are predominantly Christian. Lesotho is divided into ten administrative districts and the capital city is Maseru. It has two million inhabitants out of whom 17 per cent reside in urban areas. The country is fortunate in having an environment that is relatively free from the various types of urban pollution that plague other parts of the world.

Lesotho is one of the countries with highest literacy rate in sub-Saharan Africa. The population aged five years and over who never attended formal schooling estimated using the 1996 population census is only 22 per cent (Bureau of Statistics, 1998b). The country is also considered unusual because females are more likely than males to be educated (Lucas, 1992). Indeed, all indices of education used (e.g. school enrollment, population still attending school and literacy rate) in the analysis of the 1996 census indicate that females are better off than males (Bureau of Statistics, 1998b). Mortality in Lesotho is moderate by sub-Saharan standards and a declining trend has been observed in the recent past. Infant mortality rate is 74 deaths per 1000 live births and life expectancy at birth is 59 years for both sexes (Bureau of Statistics, 1998a).

The economy of Lesotho depends on two major resource bases. Firstly, water which is considered the only major natural resource in the country. Lesotho export water to South Africa. Currently the Lesotho Highlands Water Project is constructing Katse and Mohale dams which store water ready to be exported to the Republic of South Africa. Secondly, Lesotho's economy depends on migrant labour to South African mines. Since there is a large number of Basotho migrant workers in South Africa, the remittances they send back home contribute a lot to Lesotho's economy. According to the Central Bank of Lesotho, on the average, each mine worker in South Africa remits 71.2 per cent of his income to Lesotho every month (Central Bank of Lesotho, 1996). Therefore South Africa plays a major role on Lesotho's economy.

The government of Lesotho established the National Population Policy in 1994 (Ministry of Economic Planning, 1994) which is currently under review. The long term goal of the policy is to reduce fertility level to the replacement level by year 2011. This will be achieved mainly by "...expanding family planning and MCH facilities through clinics and outreach workers." (Ministry of Economic Planning, 1994, p. 7). Various ministries have been assigned duties in executing the policy. The Lesotho Planned Parenthood Association (LPPA) and other non-governmental organisations are also expected to play a key role in arousing people's interest in family planning and educating them against taboos that thwart the process of accepting small family norm. However, the government's commitment to the family planning programme in Lesotho is still at the foundation stage, despite the fact that more than four years have passed since the establishment of the national population policy. Ross' and Mauldin's family planning programme-effort scores suggest that Lesotho has a weak programme strength (Ross and Mauldin. 1996). Neighbouring countries like Botswana, Zimbabwe and South Africa have a moderate programme effort.

### 3 Fertility Trend: 1976-1996

### 3.1 Population census estimates

Population censuses in Lesotho have a long history starting from 19th century. But fertility questions were included in the census questionnaire for the first time in the 1976 census. Therefore fertility levels can be assessed only for the 1976, 1986 and 1996 censuses. Two types of data were obtained from those censuses on which fertility estimations were based. First, women were asked questions regarding the number of children they had ever borne. Second, women were asked how many children they had borne in the twelve months prior to the census. The answers to the first set of questions give information on the life time fertility and those to the second set on current fertility.

It has been noted that reporting retrospectively the total number of children ever born is affected by memory lapse. Women (especially older women) tend to omit some of their offspring particularly those who have left home, who have died, or who are living with another husband. The problem frequently encountered with data on current fertility is omission or over counting of births. Misreporting of age is also known to distort the shape of the reported fertility distributions. Brass (1964) has assumed that the shape and age pattern of fertility obtained from current fertility data are accurate, and developed a method (P/F ratio method) to adjust the age specific fertility rates (ASFRs) so that the total fertility rate (TFR) can be computed accurately.

The P/F ratio method is based on assumptions that young women, usually in their twenties, report their number of children ever born most accurately and that fertility has been constant in the past. Zaba (1981) has modified the method so as to overcome these two assumptions. Zaba applies the relational Gompertz model to adjust and correct fertility distributions without assuming that the quality of reporting vary with age of women and that fertility has been constant in the recent past. The method involves fitting a line using the P-points (the ratio between reported number of children ever born by women at a particular age) and F-points (the sum of the ASFRs to that age). It is then possible to remove points which are not on the line and estimate fertility by using combination of the remaining Ps and Fs.<sup>1</sup>

Details about the theory and the application procedure of the relational Gompertz model used here are given in Zaba (1981).

Table 1 presents results for three types of fertility estimates. That is, the reported TFR, official TFR and TFRs estimated using Zaba's method. The official TFR (based on the original Brass P/F ratio method) for the 1976 census is not very different to our estimate but different to the reported TFR. The reported TFR seems to be on the high side perhaps because Maseru was under-sampled for the long questionnaire which included fertility questions. As stated in the 1976 Population Census Analytical Report, "... because of over cautiousness, more questionnaire books were sent to the outlying districts and there was shortage in Maseru. This resulted in hasty reprinting and only the short questionnaire was produced. Hence in a few enumeration areas, only the short questionnaire was canvassed." (Bureau of Statistics, 1981, p. 2.1). It is likely that fertility was lower in Maseru city because it is the most urbanized area in the country and relatively more developed than other areas, and therefore overrepresentation of other areas can over-estimate fertility in Lesotho. The TFR we accept for the 1976 census is therefore 5.5 births per woman.

Table 1: TFR estimates from the Population Censuses of Lesotho.

		S	
Data Source	Reported	Official	Our estimate
1976 census	5.9	5.4	5.5
1986 census	4.9	5.3	5.0
1996	3.3	4.1	4.1

Source:

The reported and official figures are obtained from the reports listed below:

- 1. Bureau of Statistics (1981).
- 2. Bureau of Statistics (1992).
- 3. Bureau of Statistics (1998a).

The 1986 census collected similar information on fertility to that of 1976 census.<sup>2</sup> Various estimation procedures were employed (Bureau of Statistics, 1992). The official TFR which was based on Arriaga's method suggests that Basotho women bear 5.3 births during their reproductive period. However, Zaba's procedure used here suggests a slightly lower TFR of 5.0 which is closer to the reported TFR of 4.9. The reported TFR for the 1996 census is 3.3 which looks to be lower than expected. It seems this was caused mainly by the way the information was collected. Current fertility is estimated from the birth date of the last born only. Obviously many women bear more than one birth in a year: as multiple births as well as singletons. Therefore the TFR estimated using Zaba's procedure of 4.1 seems to be plausible for 1996. This implies that there was under-coverage of births during the last

The 1976 census asked fertility and mortality questions (long questionnaire) to only 10 per cent of females aged 12 years and above whereas the 1986 and 1996 censuses asked those questions to all females aged 12 years and above.

year by about 24 per cent during the 1996 census. The age pattern of fertility presented in Figure 1 suggests that fertility has been declining in all ages during the period 1986-96. This supports the view that decline of fertility in sub-Saharan Africa takes place across all ages (Caldwell *et al.*, 1992).

The same estimation procedure of TFR was done for each district using the 1996 population census data. Results are presented in Table 2. The district differentials are apparent. Maseru district, of which the capital city is located, has the lowest fertility rate (adjusted TFR of 3.3) followed by other districts in the lowlands. Districts located in the mountains (such as Thaba Tseka, Mokhotlong, Qacha's Nek and Quthing) have relatively higher fertility. The P/F ratios indicate the degree of undercoverage of births in the year prior to the census. Maseru district is having the lowest P/F ratio (14 per cent of births are under-reported), and the highest P/F ratios are observed in Leribe and Thaba-Tseka.

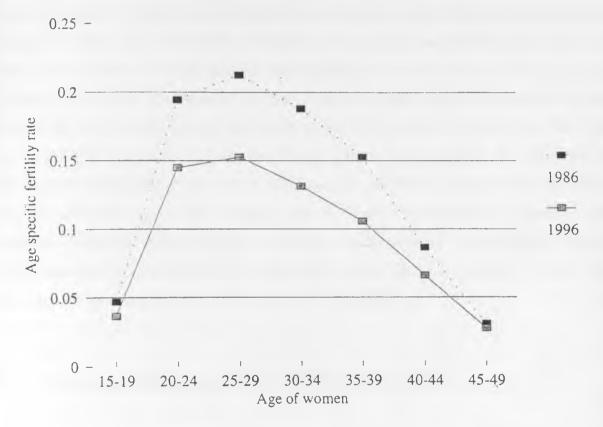
### 3.2 Estimation of fertility from national surveys

In 1977, the government of Lesotho (through the Central Bureau of Statistics now called the Bureau of Statistics) conducted a fertility survey as part of the World Fertility Survey (WFS) programme. A nationally representative sample of 3,603 women aged between 15 and 49 were successfully interviewed. Among the information collected is the pregnancy history of each woman including birth dates for each child. The official TFR estimated from the Lesotho Fertility Survey (LFS) data is 5.6 (Central Bureau of Statistics, 1981). This is consistency with the adjusted TFR for the 1976 census (of 5.5) using Zaba's procedure.

Table 2: District TFRs estimated from the 1996 population census

	Reported	Adjusted	
District	TFR	TFR	P/F ratio
Butha-Buthe	3.3	4.1	1.242
Leribe	3.2	4.1	1.281
Berea	3.5	4.2	1.200
Maseru	2.9	3.3	1.138
Mafeteng	3.2	4.0	1.250
Mohale's Hoek	3.2	4.0	1.250
Quthing	3.6	4.4	1.222
Qacha's Nek	3.8	4.5	1.184
Mokhotlong	3.9	4.7	1.205
Thaba Tseka	4.2	5.4	1.286
Total	3.3	4.1	1.242

Figure 1: Age pattern of fertility



The next survey which collected fertility information is the 1991/92 Lesotho Demographic and Health Survey (LDHS). The Ministry of Health was responsible for this survey. However, no report was published. A nationally representative sample of 4,426 women in age bracket 15-49 were interviewed. The data on fertility history for each woman was used for estimation of TFR. The TFR estimated was 4.8 which is consistent with that estimated from the 1986 census of 5.0.

In conclusion, fertility in Lesotho has declined from a TFR of around 5.5 in 1976 to a TFR of 4.1 in 1996. This is equivalent to a 25 per cent fertility decline in 20 years. It can be concluded therefore that there was a modest fertility decline in Lesotho during the period 1976-96. The pace of fertility decline in Lesotho is much lower than that observed in other southern African countries such as Zimbabwe and Botswana in the 1980s. The Zimbabwe Reproductive and Health Survey conducted in 1984 estimated a TFR of 6.5 which declined to 5.5 according to the 1988 Zimbabwe Demographic and Health Survey - a 15 per cent decline in four years- (source: first reports cited in Thomas and Muvandi, 1994). Whilst the 1984 Botswana Family Health Survey (BFHS) gave a TFR of 6.5, the 1988 BFHS showed that TFR dropped to 5.0 - a decline of 23 per cent in 4 years - (source: first reports cited in Thomas and Muvandi, 1994). All in all, it can be stated that fertility in southern Africa is the lowest compared with other parts of the continent south of Sahara. Of all countries in southern Africa (Botswana, Lesotho, Namibia, South Africa, Swaziland, and Zimbabwe), it is only Namibia which has a TFR greater than 5, all other five countries have TFR less than 5 births per woman.<sup>3</sup> It is also worth noting that fertility in Lesotho is still one of the lowest in the region.

### 4 Proximate Determinants of Fertility in Lesotho

### 4.1 Breastfeeding and Abstinence

It has been established that breastfeeding has an influence on fertility by lengthening the period of postpartum infecundability (Bongaarts and Potter, 1983). In societies where breastfeeding is generally prolonged and universal, and contraceptive use is rare, the primary determinant of birth interval length will be the duration of breastfeeding. Breastfeeding leads to the release of prolactin

The most recent TFRs for these countries are given in Kirk and Pillet (1998) except for Lesotho which we use the estimate given in this paper. The TFRs for Zimbabwe (4.3) and South Africa (4.0) are based on the most recent DHS conducted in these countries. The source of data for Botswana's (4.8), Namibia's (5.3) and Swaziland's (4.9) TFR were however not given

which inhibits the release of gonadotrophin - the hormone which initiates resumption of the menstrual cycle (McNeilly, 1993). The longer and the more intensive breastfeeding is, the greater the release of prolactin and therefore the greater the contraceptive effect of breastfeeding. Moreover, it has been noted that a woman who has stopped breastfeeding is more likely to be pregnant once ovulation returns compared with a woman still breastfeeding, due to reduction of fecundability for breastfeeding women (Guz and Hoberaft, 1991). For instance, the analysis of birth intervals among non-contracepting Tanzanian women has shown that breastfeeding is the major determinant of birth intervals even after the return of ovulation and resuming sexual relations (Mturi, 1997).

Long and intensive breastfeeding is evidently universal throughout sub-Saharan Africa. Lesotho is no exception. The 1977 LFS suggests that 97 per cent of Basotho women breastfeed their children for sometime and the average duration of breastfeeding is 20 months (Central Bureau of Statistics, 1981). However, the average duration of full breastfeeding (breastfeeding without introducing supplementary food) is rather short (3.3 months). These breastfeeding practices cause the mean duration of postpartum amenorhea of 10.8 months (Mpiti and Kalule-Sabiti, 1985). The mean duration of breastfeeding estimated from the 1991/92 LDHS is 20.5 months. It seems therefore that the prolonged breastfeeding practices have remained constant over time among Basotho women. The contribution of breastfeeding to reducing fertility below its biological maximum in Lesotho is quite significant.

In Lesotho, various forms of abstinence are practised. The most common is postpartum abstinence. In many African cultures, the resumption of intercourse is linked with weaning. Breastfeeding and sex are known to be incompatible since sperms are believed to poison the mother's milk. The mean duration of postpartum abstinence in Lesotho estimated from the 1977 LFS is 16.3 months (Mpiti and Kalule-Sabiti, 1985). The mean duration of the combined effect of postpartum amenorhea and postpartum abstinence is estimated to be 17.7 months (Mpiti and Kalule-Sabiti, 1985). The 1977 LFS also suggests that the mean birth intervals is 36 months. Therefore, breastfeeding and abstinence alone contribute half of an average birth interval. It is difficult to access the trend of postpartum abstinence due to non-availability of data, but there is general consensus that the period of postpartum abstinence is becoming shorter.<sup>4</sup> However, the demographic role of abstinence is much reduced by the relative stability of lactation.

Lesotho has been successful in maintaining long durations of postpartum abstinence because of absence of males from the country (Mpiti and Kalule-Sabiti, 1985)

#### 4.2 Marriage

In order for an ovulating woman to start childbearing, she must engage in sexual relations. Often age at first marriage has been used as a proxy for starting sexual relations. Women who marry early usually have higher lifetime fertility because they have a longer period of which they have regular sexual intercourse in the absence of marital breakdown. A delay in first marriage at aggregate level can therefore reduce fertility rates. Indeed, in some countries a rise in age at first marriage has been the most important factor for a decline in fertility rates observed (see for example Cleland *et al.* (1994) for the case of northern Sudan; Hinde and Mturi (1999) for the case of Tanzania). Marriage is almost universal in Lesotho. For instance, the 1996 population census of Lesotho suggests that only 3.8 per cent of females and 4.1 per cent of males were reported to be single by age 50 (Bureau of Statistics, 1998). Polygyny is not very popular in Lesotho. The 1996 census suggests that only 2.8 per cent (2.9 per cent for males and 2.6 per cent for females) of the population aged 15 years and above reported to be in a polygynous marriage compared with 50.1 per cent who were in monogamous marriage (Bureau of Statistics, 1998). Perhaps this is due to the fact that majority of Basotho are Christians, and the church allows only one wife.

Age at first marriage is still low in Lesotho. The 1977 LFS estimated age at first marriage for females to be 18.7 years (Central Bureau of Statistics, 1981). The Ministry of Health in collaboration with the World Health Organisation conducted a nationally representative survey (Lesotho Safe Motherhood Initiative - LSMI) in 1995. A total of 4,388 women age 12 years and above (70 per cent of these were aged 15-49) were interviewed. The age at first marriage for females estimated from the 1995 LSMI survey was 19.3 years (Ministry of Health and Social Welfare, 1995). It has been noted however that premarital fertility is on the increase in Lesotho. Whilst the 1977 LFS estimated the proportion of ever married women who gave birth before marriage of 10 per cent (Central Bureau of Statistics, 1981), The 1991 DHS estimated this proportion to be 22 per cent (Makatjane, 1998). This indicates that age at first marriage for women is not only low and constant at 19 years, but also the importance of it in Lesotho is diluted by the increase in childbearing before marriage.

Marital breakdown is another component which contributes to fertility levels in a society. The 1996 census suggests that 12 per cent of Basotho aged 15 years and above are in the category "divorced / separated / widowed" (Bureau of Statistics, 1998). Widowhood particularly for women seems to take a bigger share in this group. In Lesotho, women are more likely to be widowed than

The question on marriage dates was not asked in all decennial censuses.

that 10.3 per cent and 21.2 per cent of women aged 35-44 and 45-54 respectively were divorcees (Bureau of Statistics, 1998). The high proportion of women who are divorced estimated in the censuses and surveys perhaps is due to the low remarriage rate for females compared to their males counterparts. For instance, if a Mosotho widow remarries, she would most probably be expected to forgo some or all of the assets (such as houses) accumulated during the life of the husband and the bride price initially paid to the parents of the woman should be returned {see Mturi et al. (1998) for more discussion on this point}.

#### 4.3 Contraception

The history of family planning services in Lesotho started in 1968 when the Lesotho Planned Parenthood Association (LPPA), an affiliate of the International Planned Parenthood Federation (IPPF), was established. Since then until late 1980s, LPPA (which was receiving most of the funds from IPPF) was the only provider of family planning services. The government of Lesotho started to be involved during the fourth five year plan (1986-1991) through the Ministry of Health. It was during this period when family planning started to be a component of maternal and child health in hospitals and health centres. Until recently, the LPPA provided about 45 per cent of the family planning services in the country while accounting for 25 per cent of service points (see Tuoane and Diamond, 1997). However, the Ministry of Health has overall responsibility for the management, logistics and supplies, as well as distribution of family planning services (Ministry of Economic Planning, 1994).

The contraceptive prevalence rate (CPR) - the percentage of women in reproductive ages (15-49) who were currently married and currently using any contraceptive method - estimated from the 1977 LFS was 5.6 (computed from data given in Central Bureau of Statistics, 1981). Withdrawal, pill and female sterilisation (in that order) were the most popular methods. The 1995 LSMI survey indicated an increase in contraceptive users by registering a CPR of 20.0 per cent (Ministry of Health and Social Welfare, 1995). In this recent survey, pill, injectables and IUD were the most popular methods. This indicates a rising trend in CPR. It seems the rise in CPR started in late 1980s when the government started to be involved in family planning issues. However, as stated earlier, the commitment of the government of Lesotho toward family planning is not as strong as that of the neighbouring countries.

### 4.4 Separation of Spouses

Married women who separate with their husbands for one reason or another, other things being equal, are known to have longer birth intervals (and consequently lower fertility) than other women who are staying with their husbands all the time (Bongaarts and Potter, 1983). High prevalence of migrant labour to South African mines coupled with the law refusing migrant workers to be accompanied by their families to South Africa has resulted in married women to be separated with their husbands. This factor has been consistently mentioned as the main reason for suppressing fertility among Basotho women particularly when compared with fertility for women in the neighbouring countries (see for example Mpiti and Kalule-Sabiti, 1985; Timaeus and Graham, 1989; Lucas, 1992).

However, some writers believe that this is no more a strong proximate determinant of fertility in Lesotho since migrant workers visit their homes very frequently nowadays (Makatjane, 1997). In fact, some migrant workers visit their homes every fortnight. There is also an issue of Basotho migrant labour retrenchments (which also affect other countries exporting labour to South Africa). Various South African mines are either closing down or reducing the number of workers in order to reduce the high cost of production (Makatjane, 1994). Furthermore, various analysts on the future of labour migration suggest that during post-apartheid South Africa, mines will prefer to employ locals who have greater residential security (for the summary of this debate see Makatjane, 1994).

### 4.5 Induced Abortion and Sterility

Data on induced abortion are very scarce in sub-Saharan Africa. This is due to the fact that induced abortion is illegal in most African countries (including Lesotho), unless performed to save the mother's life. It is therefore difficult to assess the effect of induced abortion on fertility in the region. It has been observed, however, that abortion is in fact not uncommon, particularly in urban areas and the number of cases presented at hospitals for abortion is increasing (Coeytaux, 1988). It was not possible to assess the situation of induced abortion in Lesotho because there is no study conducted even in a small scale. It is therefore a research priority to assess the magnitude of induced abortion in this country.

Sterility has been known to affect fertility. This is particularly the case where there is high incidence of sterility like in central Africa. The proportion of married women aged 45-49 who are childless is usually used as an indicator of primary sterility. The 1977 LFS suggests that 4.1 per cent of women aged 45-49 had no live birth (Mpiti and Kallule-Sabiti, 1985, Table 5). Using the same LFS

data, Larsen (1993) demonstrated that if sterility is eliminated in Lesotho, TFR will rise by 29 per cent. The 1976 and 1986 population censuses have estimated that 10.4 per cent of women aged 45-49 have no live birth, the 1996 census estimated a proportion of 6.0 per cent (Bureau of Statistics, 1998). In parts of central Africa over 20 per cent of women aged 45-49 were childless whereas in east Africa sterility levels lies between 12-20 per cent (Bongaarts *et al.*, 1984). It can be concluded therefore that sterility is still low in Lesotho.

### 5. Discussion

The information given above suggests that fertility has been declining in Lesotho during the period 1976-1996. During the 1970s, on the average, a Mosotho woman was having more than five children during her childbearing ages compared with four children estimated from the 1996 population census data. This declining trend is not as fast as that observed in the neighbouring countries but still puts fertility in Lesotho to be one of the lowest in sub-Saharan Africa.

The proximate determinants of fertility in Lesotho can be put into three categories. First, those which have small effect on fertility. Second, those which have a substantial effect in reducing fertility below natural maximum but no change overtime, and third, those which are changing overtime and contribute substantially in the declining trend we are observing. Induced abortion and sterility fall under category one. Although we do not have data on abortion, it seems its impact on fertility in Lesotho is currently minimal. The magnitude of primary sterility seems not to be alarming. But, it is important to understand the extent of secondary sterility in this country, of which data are not available. Category two comprises of breastfeeding and marriage. Since breastfeeding is prolonged and universal in Lesotho, the duration of postpartum amenorrhea and postpartum abstinence will still contribute a lot in reducing fertility below its maximum level. Data on marriage suggests that age at first marriage for females has remained constant at 19 years during the period 1977-95.

Use of contraception and spouse separation form the third category. The importance of use of contraception on fertility in Lesotho is apparent given the trend observed for the period 1977-95. It seems most of the decline in fertility is a result of a rise in use of contraception. The CPR of 20 per cent in 1995 suggests that there is still much room to increase the prevalence. The effect of spouse separation operates through abstinence. The contribution of spouse separation in the past on causing the low levels of fertility in Lesotho has been appreciated. But its contribution in future seems to be in the opposite direction. Since migrant workers in South Africa are capable to have frequent visits home

and the fact that a lot of Basotho men working in the South African mines are retrenched, the effect of spouse separation on fertility in this country will soon be diluted. Therefore, there is a need to put more effort in providing family planning services so that any rise in fertility can be compensated.

It seems more effort is needed so that the government target of reducing fertility to a TFR of 2.1 by year 2011 can be realised. The examination of the proximate determinants of fertility suggests that much more intake of family planning supplies is needed in order for fertility to keep declining. This is likely to happen if there is a strong government commitment on the family planning programme. The few countries in Africa where a substantial fertility decline has been observed within a short period of time (e.g. Kenya, Botswana and Zimbabwe) have a government which is very committed to the family planning programme in terms of political will and availability of resources.

### 6. Future Research Priorities

- (i) The overall trend of fertility given here is by no means conclusive. It is important therefore to study the components of fertility (for example by using parity progression ratios) and establish the timing of fertility changes in Lesotho.
- (ii) It is going to be useful if the effects of the proximate determinants on fertility can be substantiated and establish the trend over time.
- (iii) It is important to understand the situation at foundation stage of the family planning programme so that the progress of the programme can be assessed in the future.
- (iv) It is important to establish other social, economic and demographic factors associated with fertility of Basotho women.

#### References

- Bongaarts, J. and Potter, R.G. (1983). Fertility, Biology and Behaviour: An Analysis of the Proximate Determinants. Academic Press, New York.
- Bongaarts, J., Odile, F. and Lesthaeghe, R. (1984). "The Proximate Determinants of Fertility in Sub-Saharan Africa." *Population Development Review*, 10(3):511-537.
- Brass, W. (1964). "Uses of Census and Survey Data on the Estimation of Vital Rates." Paper Prepared for the African Seminar on Vital Statistics, Economic Commission of Africa, Addis Ababa-Ethiopia.
- Bureau of Statistics (1981). 1976 Population Census Analytical Report, Volume IV. Government of Lesotho, Maseru Lesotho.
- Bureau of Statistics (1992). 1986 Population Census Analysis Report, Volume IV. Government of Lesotho, Maseru Lesotho.
- Bureau of Statistics (1998a). 1996 Population Census Analytical Report: Volume IIIA, Government of Lesotho and UNFPA, Maseru Lesotho.
- Bureau of Statistics (1998b). 1996 Population Census Analytical Report: Volume IIIB, Government of Lesotho and UNFPA, Maseru Lesotho.
- Caldwell, J.C., Orubuloye, I.O. and Caldwell, P. (1992). "Fertility Decline in Africa: A New Type of Transition?" *Population and Development Review*, 18, 211-242.
- Central Bank of Lesotho (1996). Emerging Trends in the Migration of Basotho Miners. Morija Printing Works, Morija Lesotho.
- Central Bureau of Statistics (1981). Lesotho Fertility Survey 1977. First Report, Volume I. Government of Lesotho, Maseru Lesotho.
- Cleland, J., Onuoha, N. and Timaeus, I. (1994). "Fertility Change in Sub-Saharan Africa: A Review of Evidence." In: *The Onset of Fertility Transition in Sub-Saharan Africa*. Locoh, T. and Hertrich, (eds.), pp. 1-20. Ordina Editions, Liege. Belgium.
- Coeytaux, F.M. (1988). "Induced Abortion in Sub-Saharan Africa: What We Do and Do Not Know. *Studies in Family Planning*, 19(3): 186-190.
- Guz, D. and Hobcraft, J. (1991). "Breastfeeding and fertility: A Comparative Analysis." *Population Studies*, 45(1):91-108.
- Hinde, A. and Mturi, A.J. (1999). "Recent Trends in Tanzanian Fertility." Unpublished Manuscript.
- Kirk, D. and Pillet, B. (1998). "Fertility in Sub-Saharan Africa in the 1980s and 1990s." Studies in Family Planning, 29(1): 1-22.
- Larsen, U. (1993). "Levels, Age Patterns and Trends of Sterility in Selected Countries South of the Sahara." In: *International Population Conference: Montreal*, 1993, Volume 1: 593-603, Liege -Belgium.
- Lucas. D. (1992). "Fertility and Family Planning in Southern and Central Africa." Studies in Family Planning, 23(3):145-158.
- Makatjane, T.J. (1994). "The Future of Labour Migration: Its Implications for Lesotho." Lesotho Social Sciences Review, 1(2): 26-38.

- Makatjane, T.J. (1997). "Contraceptive Prevalence in Lesotho: Does the Sex of the Household Head Matter?" African Population Studies, 12(2): 1-11.
- Makatjane, T.J. (1998). "Pre-marital Sex and Childbearing in Lesotho". Paper presented at the British Society for Population Studies (B.S.P.S.) annual conference at Corpus Christi College, University of Cambridge, UK, September 2-4.
- McNeilly, A.S. (1993). "Breastfeeding and Fertility." In: *Biomedical and Demographic Determinants of Reproduction*. Gray, R., Leridon, H. and Spira, A. (eds.), pp. 391-412. Clarendon Press, Oxford.
- Ministry of Economic Planning (1994). Lesotho National Population Policy. Government of Lesotho, Maseru Lesotho.
- Ministry of Health and Social Welfare (1995). Lesotho Safe Motherhood Initiative: Women's Health Survey. Government of Lesotho, Maseru Lesotho.
- Mpiti, A.M. and Kalule-Sabiti (1985). "The Proximate Determinants of Fertility in Lesotho." WFS Scientific Reports, no. 78. International Statistical Institute, Voorburg Netherlands.
- Mturi, A.J. (1997). "The Determinants of Birth Intervals Among Non-contracepting Tanzanian Women". African Population Studies, 12(2):13-22.
- Mturi, A.J., Makatjane, T. and Molise, N. (1998). "Gender Differentials in Housing Characteristics and Household Possessions in Lesotho Urban Areas." Unpublished Manuscript.
- Ross, J.A. and Mauldin, W.P. (1996). "Family Planning Programs: Efforts and Results, 1972-94." *Studies in Family Planning*,27(3):137-147.
- Thomas, D. and Muvandi, I. (1994). "The Demographic Transition in Southern Africa: Another Look at the Evidence from Botswana and Zimbabwe". *Demography*, 31(2): 185-207.
- Timaeus, I. and Graham, W. (1989). "Labour Circulation, Marriage and Fertility in Southern Africa." In: Lesthaeghe, R.J. (ed.) *Reproduction and Social Organisation in Sub-Saharan Africa*. University of California Press, Berkeley USA.
- Tuoane, M. and Diamond, I. (1997). "Analysis of Factors Affecting Contraceptive Use and Method Choice in Lesotho." Paper presented at the Royal Geographical Society / Institute of British Geographers annual conference, University of Exeter, 7-10 January.
- Zaba, B. (1981). Use of the Relational Gompertz Model in Analysing Fertility Data Collected in Retrospective Surveys." CPS Working Paper 81-2, London School of Hygiene and Tropical Medicine.



This work is licensed under a Creative Commons
Attribution – NonCommercial - NoDerivs 3.0 License.

To view a copy of the license please see: http://creativecommons.org/licenses/by-nc-nd/3.0/

