FERTILITY LEVELS AND TRENDS 4

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The assessment of the levels, trends, and differentials in fertility in Malawi is especially relevant at this time for two reasons. First, the national population policy is currently being reviewed and reevaluated for the first time since its adoption in 1994. Second, the last time a DHS survey was conducted was in 1992 and the demographic profile of the nation can no longer rely on outdated data. The 2000 Malawi Demographic and Health Survey findings will facilitate evaluation of the demographic impact of successes in the uptake of family planning in the country over the last decade.

This chapter presents the 2000 MDHS results on levels, trends, and differentials in fertility based on the analysis of the reported birth histories of women age 15-49 who were interviewed during the survey. This information was collected by asking each woman to report the number of her own children living with her, the number living elsewhere, and the number who had died. She was then asked a complete history of each of her live births. The detailed information collected on each of her children included sex; year and month of birth; and if dead, age at death, or if alive, whether the child was living with the respondent. Current fertility (age-specific and total fertility) and completed fertility (number of children ever born alive to the woman) are examined in relation to various background characteristics such as urban-rural residence, educational level of the woman, and region and district of residence.

4.1 CURRENT FERTILITY LEVELS AND TRENDS

The most widely used measures of current fertility are the total fertility rate (TFR) and its component age-specific fertility rates (ASFRs). The TFR is defined as the total number of births a woman would have by the end of her childbearing period if she were to pass through those years bearing children at the currently observed rates of age-specific fertility. To obtain the most recent estimates of fertility without compromising the statistical precision of estimates and also as an attempt to avoid possible displacement of births from five to six years before the survey, the three-year period just prior to the survey is used, which roughly corresponds to the calendar period 1998-2000.

Current total fertility and age-specific fertility rates for Malawi, by urban and rural area are presented in Table 4.1. The results indicate that if fertility were to remain constant at the current age-specific rates measured in the survey (within 36 months before the survey), a woman in Malawi would, on average, bear 6.3 children in her lifetime. The corresponding total fertility rates for urban and rural areas are 4.5 and 6.7 children per woman, respectively. The TFR measured in the 2000 MDHS survey is lower than the corresponding rate of 6.7 obtained in the 1992 MDHS survey (for the 1989-1992 period). The current TFR indicates that fertility in Malawi has declined by 6 percent during the past decade or so. Fertility has declined more rapidly in urban areas (18 percent) than in rural areas (3 percent) during this period.

Table 4.1 Current fertility

Age-specific and cumulative fertility rates and the crude birth rate for the three years preceding the survey, by residence, Malawi 2000

	Residence		
Age group	Urban	Rural	Total
15-19	134	180	172
20-24	243	319	305
25-29	223	282	272
30-34	145	232	219
35-39	104	176	167
40-44	51	100	94
45-49	1	45	41
TFR 15-49	4.5	6.7	6.3
TFR 15-44	4.5	6.4	6.1
GFR	173	233	223
CBR	40.8	46.2	45.5

Note: Rates are for the period 1-36 months preceding the survey. Rates for age group 45-49 may be slightly biased due to truncation.
TFR: Total fertility rate for ages 15-49 expressed per woman
GFR: General fertility rate (births ÷ no. of women 15-44) expressed per 1,000 women
CBR: Crude birth rate expressed per 1,000 population

A further examination of the patterns of fertility in urban and rural areas reveals that rural fertility is higher than urban fertility at every age. The peak of childbearing among women in both urban and rural areas is 20-24 as was also observed in past censuses and demographic surveys. However, elevated childbearing in urban areas is rather limited to the peak at age 20-24, unlike in the rural areas where childbearing is elevated over the age range 20-34. Urban women thus tend to start limiting their family size (or spacing births) at an earlier age than rural women.

Table 4.2 and Figure 4.1 show fertility differentials by background characteristics. In addition to the urban-rural difference, there exist notable geographic and education-related variations in the TFR. Women with no formal education have a TFR of 7.3 children per woman, compared with 6.7 for those with one to four years of primary education, 6.0 for those with five to eight years of primary education, and 3.0 for those with secondary education or higher.

Fertility variations across regions are not very large: women in the Southern Region have a TFR of 6.0 children per woman, about one child less than women from the Central Region who have the highest total fertility rate of 6.8. Women in the Northern Region have a TFR of 6.2 children per woman. District variation is more substantial, with TFRs ranging from 4.3 children per woman in Blantyre District to more than 7 children per woman in Mangochi, Machinga, and Kasungu districts.

At the time of the survey, about 12 percent of the women interviewed reported that they were pregnant. This proportion is probably an underestimate because some women who are early in their pregnancy do not yet know that they are pregnant, and some women may not want to declare that they are pregnant. The proportions of pregnant women in urban areas (10 percent) and those with secondary education or higher (8 percent) are lower than those for the other populations subgroups. As expected, levels of current pregnancy prevalence correlate with the levels of current fertility in population subgroups.

Table 4.2 also allows a crude assessment of differential trends in fertility over time among population subgroups. The mean number of children ever born alive to a women age 40-49 years is a measure of past completed fertility. A comparison of current fertility (total fertility rate) with past fertility (completed) shows, for example, that there has been a substantial decline (40 percent) in fertility in Malawi among women with secondary education or higher. There have been modest declines in fertility among women with five to eight years of primary education (9 percent), urban women (24 percent), and women in the Southern Region (8 percent). Fertility in the Northern Region and in rural areas has remained virtually constant, but fertility for women with no formal education may have actually increased by about 6 percent. Differential trends among districts are

Table 4.2 Fertility by background characteristics

Total fertility rate for the three years preceding the survey, percentage currently pregnant, and mean number of children ever born to women age 40-49 years, by background characteristics, Malawi 2000

Background characteristic	Total fertility rate[1]	Percentage currently pregnant	Mean number of children ever born to women age 40-49
Residence			
Urban	4.5	9.8	5.9
Rural	6.7	12.3	6.9
Region			
Northern	6.2	11.8	6.4
Central	6.8	12.8	7.3
Southern	6.0	11.1	6.5
Education			
No education	7.3	11.9	6.9
Primary 1-4	6.7	12.9	7.0
Primary 5-8	6.0	12.4	6.6
Secondary and higher	3.0	7.5	5.0
Districts			
Blantyre	4.3	9.6	6.3
Karonga	5.6	11.7	6.1
Kasungu	7.0	14.1	7.6
Lilongwe	6.5	13.3	6.8
Machinga	7.0	14.6	6.7
Mangochi	7.4	10.8	6.9
Mulanje	5.5	9.0	6.3
Mzimba	6.7	10.9	6.7
Salima	6.7	14.0	7.1
Thyolo	5.3	10.2	6.0
Zomba	6.2	11.2	6.1
Other districts	6.8	12.3	7.2
Total	6.3	11.9	6.8

[1] Rate for women age 15-49 years.

notable. In Blantyre, fertility has declined by about 2 children per woman and in Thyolo and Mulanje, declines of 0.7 to 0.8 children per women occurred. On the other hand, the data indicates that little decrease in fertility has taken place in Zomba, Lilongwe, Salima, and Mzimba. In the districts of Mangochi and Machinga, fertility levels may have risen slightly.

More direct evidence of the declining trend in fertility is obtained by looking at changes in age-specific fertility rates across three surveys that were conducted in Malawi since the early 1980s: the 1984 Family Formation Survey, the 1992 MDHS survey, and the 2000 MDHS survey (Table 4.3 and Figure 4.2). The results show that fertility declined in all groups between the 1984 and 1992 surveys. Between the 1992 and 2000 surveys, fairly dramatic downturns in fertility were seen at age 30 and above, but under age 25, fertility may have slightly increased. Over the whole period covered by the surveys (early 1980s to late 1990s), the TFR decreased by 17 percent.

Figure 4.1 Total Fertility Rates by Background Characteristics

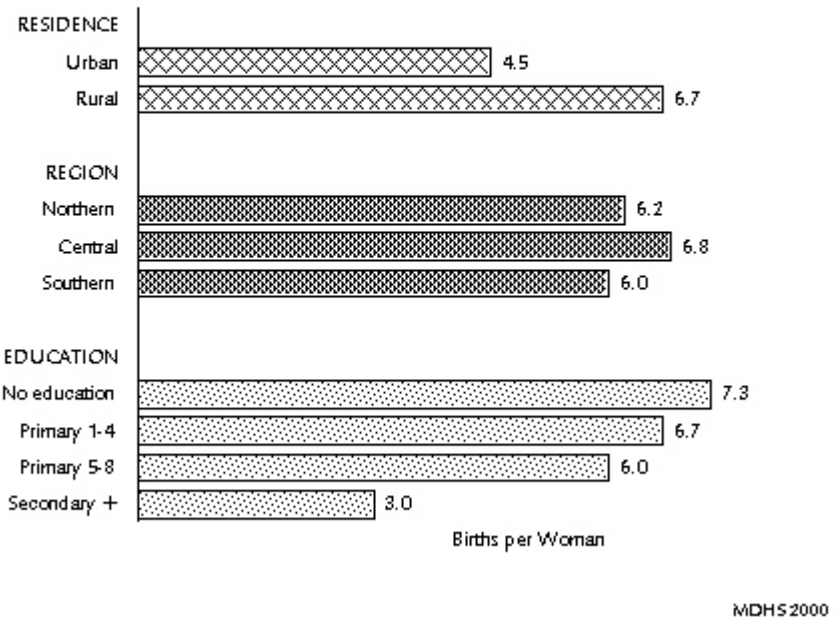


Table 4.3 Trends in fertility

Age-specific fertility rates (per 1,000 women) and total fertility rates for the three years preceding the survey, Malawi 1984, 1992, and 2000

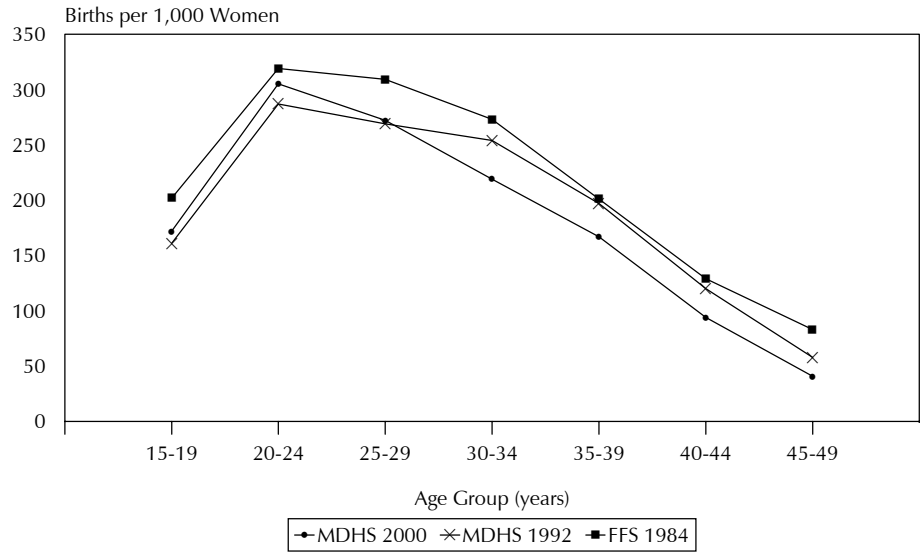
Age group	1984 FFS[1]	1992 MDHS	2000 MDHS
15-19	202	161	172
20-24	319	287	305
25-29	309	269	272
30-34	273	254	219
35-39	201	197	167
40-44	129	120	94
45-49	83	58	41
Total fertility rate	7.6	6.7	6.3

[1] Family Formation Survey. Based on four years prior to survey.

Further evidence of a recent modest decline in fertility in Malawi comes from analysis of the fertility of age cohorts of women in the 2000 MDHS survey (i.e., by examining trends within age groups). Table 4.4 shows age-specific fertility rates for four-year periods preceding the survey. Because women age 50 and above were not interviewed in the survey, the rates for calendar periods preceding the survey will be increasingly truncated by the exclusion of the fertility experience of older women. The table shows that, again, the reduction in total fertility rates is due principally to declines in the older age groups. There has been little or no change in fertility among women age 20-24, and a small recent rise in women age15-19.

The rise in contraceptive use occurring over the last decade (see next chapter) is likely to explain, at least in part, the fertility trends documented here.

Figure 4.2 Trends in Age-Specific Fertility Rates 1984 FFS, 1992 MDHS, and 2000 MDHS



Note: FFS is the Family Formation Survey

Table 4.4 Trends in age-specific fertility rates

Age-specific fertility rates for four-year periods preceding the survey, by mother's age at the time of the birth, Malawi 2000

Mother's age at birth	Number of years preceding survey				
	0-3	4-7	8-11	12-15	16-19
15-19	167	151	161	180	188
20-24	307	304	305	308	302
25-29	276	275	286	308	[294]
30-34	219	237	264	[272]	-
35-39	169	179	[209]	-	-
40-44	99	[116]	-	-	-
45-49	[50]	-	-	-	-

Note: Age-specific fertility rates are per 1,000 women. Estimates in brackets are truncated.

4.2 CHILDREN EVER BORN

The distribution of women by number of children ever born is presented in Table 4.5 for all women and currently married women. The table also shows the mean number of children ever born (CEB) to women in each five-year age group. On average, women have given birth to three children by their late twenties, six children by their late thirties, and seven children by age 45-49. Of the 7 children ever born to women age 45-49, only 4.9, or about 70 percent, have survived.

The distribution of women by children ever born indicates that about one-quarter of the women age 15-19 have already given birth to at least one child, and about one fifth of the women age 45-49 have had ten or more children.

The results for younger women who are currently married differ from those for the sample as a whole because of the large number of young unmarried women with minimal fertility. Differences at older ages, though modest, generally reflect the impact of marital dissolution althrough divorce or widowhood. The desire for children is nearly universal in Malawi and so the proportion of married women at 45-49 years who are still childless is a rough indicator of *primary infertility,* or the inability to bear children. The survey results suggest that primary infertility is low in Malawi, with only 2 percent of Malawian women unable to bear children. It should be pointed out here that this estimate of primary infertility does not include women who may have had one or more births but who are unable to have more children, or *secondary infertility*.

Table 4.5 Children ever born and living

Percent distribution of all women and currently married women by number of children ever born (CEB), and mean number of children ever born and mean number of living children, according to age group, Malawi 2000

Age	Number of children ever born											Total	Number	Mean number of CEB	Mean number of living children
	0	1	2	3	4	5	6	7	8	9	10+				
ALL WOMEN															
15-19	74.6	20.9	4.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	100.0	2,867	0.30	0.26
20-24	16.7	33.3	31.8	14.5	3.2	0.4	0.1	0.0	0.0	0.0	0.0	100.0	2,957	1.56	1.29
25-29	4.0	9.9	19.1	30.0	20.5	11.5	4.0	0.7	0.1	0.1	0.0	100.0	2,401	3.09	2.46
30-34	3.0	5.5	7.5	11.5	21.1	21.9	15.8	9.6	2.7	0.8	0.5	100.0	1,566	4.46	3.56
35-39	2.2	4.4	6.3	7.6	10.3	12.4	19.9	15.5	12.9	5.6	2.9	100.0	1,424	5.55	4.30
40-44	1.8	3.0	3.8	7.2	8.2	7.6	12.7	14.8	14.9	11.3	14.9	100.0	1,053	6.63	4.97
45-49	2.0	3.2	4.3	5.7	5.5	9.6	12.1	11.3	13.5	12.0	20.8	100.0	951	6.99	4.89
Total	21.5	15.4	13.6	11.9	9.1	7.4	6.6	4.9	3.9	2.5	3.1	100.0	13,220	3.13	2.42
CURRENTLY MARRIED WOMEN															
15-19	39.8	48.3	10.7	0.9	0.3	0.0	0.0	0.0	0.0	0.0	0.0	100.0	934	0.74	0.62
20-24	8.8	34.0	35.6	17.3	3.7	0.5	0.1	0.0	0.0	0.0	0.0	100.0	2,324	1.75	1.44
25-29	2.4	9.0	18.7	31.0	21.1	12.3	4.3	0.8	0.2	0.1	0.0	100.0	2,102	3.19	2.56
30-34	2.8	4.5	6.1	10.0	21.4	23.2	17.0	10.7	2.8	0.9	0.5	100.0	1,312	4.62	3.69
35-39	2.2	3.8	5.6	7.1	9.9	12.4	20.1	15.7	13.5	6.5	3.3	100.0	1,192	5.69	4.42
40-44	1.6	2.7	3.2	6.9	8.0	6.4	12.0	14.8	15.2	12.8	16.5	100.0	848	6.84	5.16
45-49	2.0	3.6	3.5	6.0	5.5	8.6	10.4	10.5	14.5	13.0	22.4	100.0	739	7.11	4.98
Total	7.6	16.8	16.1	14.6	11.0	8.9	7.8	5.8	4.6	3.1	3.7	100.0	9,452	3.74	2.91

4.3 BIRTH INTERVALS

Information on the length of birth intervals provides insight into birth spacing patterns. Research has shown that children born too soon after a previous birth are at an increased risk of poor health and consequently an increased risk of dying, particularly when the interval between births is less than 24 months. Maternal health is also jeopardised when births are closely spaced. Table 4.6 shows the distribution of births in the five-year period preceding the survey by the number of months since the previous birth, according to various selected demographic and socioeconomic variables. First births are excluded from the table. The survey results indicate that about one in every six births (17 percent) in Malawi occurs less than 24 months after the birth of the previous child. The overall median birth interval length is 33.8 months, which is about one month longer than it was in the 1992 MDHS survey.

Table 4.6 Birth intervals

Percent distribution of non-first births in the five years preceding the survey by number of months since preceding birth, according to demographic and background characteristics, Malawi 2000

Background characteristic	Months since preceding birth					Total	Median number of months since preceding birth	Number
	7-17	18-23	24-35	36-47	48+			
Age								
15-19	13.9	26.6	44.4	12.1	3.0	100.0	25.7	128
20-29	6.3	13.6	45.2	21.5	13.4	100.0	31.6	5,047
30-39	3.8	9.6	33.5	25.9	27.2	100.0	36.8	3,188
40-49	5.5	6.7	29.0	23.9	35.0	100.0	39.7	967
Birth order								
2-3	5.7	13.3	43.6	21.1	16.3	100.0	32.1	4,247
4-6	4.9	10.6	37.2	25.3	22.1	100.0	35.2	3,401
7 +	6.0	9.8	33.8	24.0	26.4	100.0	36.1	1,681
Sex of preceding birth								
Male	5.1	11.8	39.5	23.5	20.1	100.0	34.0	4,633
Female	5.9	11.6	39.5	22.7	20.3	100.0	33.7	4,697
Survival of preceding birth								
Living	3.0	9.8	41.1	24.8	21.3	100.0	34.8	7,468
Dead	15.3	19.2	33.1	16.4	16.0	100.0	28.2	1,862
Residence								
Urban	3.5	10.1	35.8	24.8	25.9	100.0	36.2	1,018
Rural	5.7	11.9	40.0	22.9	19.5	100.0	33.6	8,312
Region								
Northern	3.6	8.7	38.6	26.2	22.8	100.0	35.7	1,050
Central	6.1	11.8	40.4	23.1	18.6	100.0	33.3	4,140
Southern	5.4	12.3	38.8	22.4	21.2	100.0	33.7	4,141
Education								
No education	5.5	12.0	38.0	22.9	21.5	100.0	34.3	3,408
Primary 1-4	6.0	12.4	40.5	21.9	19.2	100.0	32.9	2,943
Primary 5-8	4.9	10.9	41.0	24.3	18.9	100.0	33.8	2,614
Secondary+	4.7	8.2	34.6	26.4	26.1	100.0	36.9	365
Total	5.5	11.7	39.5	23.1	20.2	100.0	33.8	9,330

Note: First-order births are excluded. The interval for multiple births is the number of months since the preceding pregnancy that ended in a live birth.

In Malawi, birth intervals tend to be shorter for younger mothers and for births occurring after the preceding sibling has died. The latter relationship is the result largely of *replacement fertility,* whereby a mother will get pregnant again soon after the death of a child. The median birth interval length is shortened by about seven months when the preceding sibling dies.

The results also show that only 13 percent of the births to women with secondary education or higher were born after less than 24 months, compared to 18 percent of the births to women with less than 5 years of primary education.

4.4 AGE OF MOTHERS AT FIRST BIRTH

One of the factors that determines the level of current fertility in a population is the average age at first birth. Early childbearing generally leads to a large family size and is often associated with increased health risks for the mother and potential health hazards for the children. A rise in the median age at first birth is typically a sign of transition to lower fertility levels.

Table 4.7 presents the percentage of women who have given birth by specified ages and the median age at first birth, according to current age. The results show that the median age at first birth for the youngest cohort of women is 19.3 years, a modest increase of 0.4 years over the median age measured in the 1992 MDHS survey. However, there is also evidence of a modest increase in the median age at first birth for all the women age 20-49. In the 1992 MDHS survey, the median age at first birth was 18.9 years, 0.2 years lower than the median age of 19.1 observed in 2000 MDHS survey. This interpretation is supported by the decrease in the percentage of births that occurred at a very young age (less than 15 years) from 8 percent among women currently age 30-34 to only 1 percent among the women now age 15-19. Further, the percentage of births occurring at very young ages has declined from about 3 percent as observed in the 1992 MDHS survey to the current level of 1 percent.

Table 4.7 Age at first birth

Percentage of women who had their first birth by specific exact ages and median age at first birth, by current age, Malawi 2000

Current age	Percentage who had first birth by exact age: 15	18	20	22	25	Percentage who have never given birth	Number	Median age at first birth
15-19	1.3	na	na	na	na	74.6	2,867	a
20-24	4.2	30.3	61.7	na	na	16.7	2,957	19.3
25-29	5.8	32.7	60.9	82.0	92.9	4.0	2,401	19.2
30-34	7.8	38.5	65.3	83.2	92.7	3.0	1,566	18.8
35-39	7.4	36.5	62.4	78.1	90.1	2.2	1,424	19.0
40-44	10.6	39.6	62.6	79.8	91.6	1.8	1,053	19.0
45-49	7.0	33.6	60.0	73.2	85.1	2.0	951	19.2

na = Not applicable
[a] Omitted in populations where less than 50 percent of the women in the age group × to × + *4* have had a birth by age ×

Table 4.8 shows the median age at first birth for different age cohorts of women across urban-rural residence, regional, and educational subgroups. There is a small difference in the median age at first birth between urban women (19.7 years) and rural women (19.0 years). At the regional level, first births occur later, on average, in the Central Region than in the Northern and Southern regions. Age at first birth varies significantly with a woman's level of education, ranging from 19 years for women with no education or primary education to 22 years among women with secondary education or higher.

Table 4.8 Median age at first birth by background characteristics

Median age at first birth among women age 20-49 years, by current age and background characteristics, Malawi 2000

Background characteristic	Current age						Women age 20-49	Women age 25-49
	20-24	25-29	30-34	35-39	40-44	45-49		
Residence								
Urban	20.1	19.8	19.0	19.5	19.3	18.9	19.7	19.4
Rural	19.1	19.2	18.8	18.9	18.9	19.3	19.0	19.0
Region								
Northern	19.0	18.6	18.9	18.4	18.6	18.4	18.7	18.6
Central	19.6	19.4	19.0	19.3	19.4	19.4	19.4	19.3
Southern	19.0	19.2	18.6	18.9	18.7	19.3	19.0	18.9
Education								
No education	18.4	18.9	18.3	19.3	18.8	19.6	18.8	18.9
Primary 1-4	18.9	19.1	18.7	18.3	18.3	19.1	18.8	18.8
Primary 5-8	19.1	19.1	19.1	19.1	19.3	18.5	19.1	19.1
Secondary+	20+[a]	22.3	21.3	21.1	21.3	19.6	20+[a]	21.6
All women	19.3	19.2	18.8	19.0	19.0	19.2	19.1	19.1

[a] Less than 50 percent of respondents have had a birth by age 20; median is at least 20 years.

4.4.1 ADOLESCENT FERTILITY

The issue of adolescent fertility is important for both health and social reasons. Children born to very young mothers face an increased risk of illness and death. Adolescent mothers themselves are more likely to experience adverse pregnancy outcomes and maternity-related mortality than more mature women, and they are more constrained in their ability to pursue educational opportunities than their counterparts who delay childbearing.

Table 4.9 shows the percentage of adolescent women (age 15-19) who were mothers or pregnant with their first child by selected background characteristics. About one-quarter of adolescent women in Malawi are already mothers with at least one child, and a further 8 percent are currently pregnant. The proportion of teenagers already on the family formation pathway rises very rapidly with age. Only about 4 percent of women age 15 have started childbearing, but by age 19, about two-thirds are pregnant or have had a baby. Overall, 33 percent of adolescents have begun childbearing, compared with 35 percent based on the 1992 MDHS survey.

In rural areas, 34 percent of the adolescents have already begun childbearing, compared with 27 percent in urban areas. Regional variations also exist: 36 percent of the adolescents in the Southern Region are either mothers or are pregnant with their first child, compared with 33 percent and 30 percent of their counterparts in the Northern and Central regions, respectively.

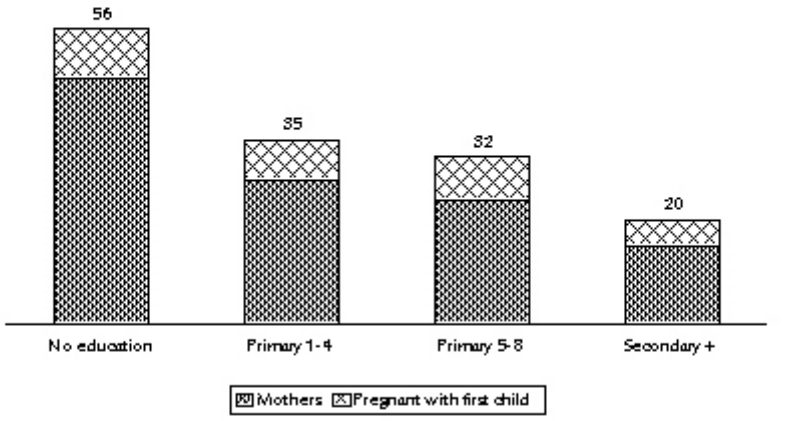
Table 4.9 Teenage pregnancy and motherhood

Percentage of women age 15-19 who are mothers or pregnant with their first child, by background characteristics, Malawi 2000

Background characteristic	Percentage who are: Mothers	Pregnant with first child	Percentage who have begun child-bearing	Number
Age				
15	2.0	2.3	4.2	541
16	7.6	5.6	13.2	577
17	21.5	8.0	29.5	501
18	37.0	11.5	48.5	723
19	56.6	9.8	66.4	524
Residence				
Urban	20.1	7.0	27.1	490
Rural	26.4	7.8	34.2	2,377
Region				
Northern	23.8	9.0	32.8	332
Central	22.3	7.4	29.7	1,122
Southern	28.1	7.5	35.7	1,413
Education				
No education	46.6	9.4	56.1	219
Primary 1-4	27.5	7.6	35.1	943
Primary 5-8	23.5	8.2	31.7	1,297
Secondary+	14.8	4.9	19.7	408
Total	25.4	7.6	33.0	2,867

A strong link between continuing education and early motherhood is clear from the survey results (Figure 4.3). Whereas 56 percent of adolescents with no formal education have started childbearing, only 20 percent of their counterparts with secondary education or higher have done so.

Figure 4.3 Percentage of Women Age 15-49 Who Are Mothers or Pregnant with Their First Child, by Level of Education



MDHS 2000