

MARITAL PATTERNS AND FERTILITY IN SOUTH AFRICA: THE EVIDENCE FROM THE 1996 POPULATION CENSUS

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ABSTRACT

Variation in fertility levels among different groups or sub-groups within a population may sometimes be explained in terms of differentials in marital pattern. There is paucity of information regarding the relationship between marital patterns and fertility in South Africa. This study examines marital patterns and fertility in South Africa based on the 1996 population census.

The results of the analysis appear to suggest that women in South Africa have the highest mean age at first marriage in the world. The high values of mean age at first marriage may have been biased upward due to cultural factors. Marital patterns appear to contribute to the relatively low fertility (by African standards) in South Africa. The apparent reduction in total fertility rate attributable to marital patterns was much higher among Africans and coloureds than among Indians and whites in South Africa.

MARITAL PATTERNS AND FERTILITY IN SOUTH AFRICA: THE EVIDENCE FROM THE 1996 POPULATION CENSUS¹

INTRODUCTION

Although it is well established in demographic literature that one of the proximate determinants of fertility is marriage (Bongaarts, 1978), the relationship between marital patterns and fertility is complex. Among other proximate factors, the exposure to the risk of childbearing in any population is determined by the age at onset of sexual relations, and marital stability and dissolution. In societies where pre-marital relations and childbearing outside marriage are not common, the age at first marriage is a good indication of the time when women first enter sexual unions. Also, in such societies, the frequency of marital dissolution and re-marriage are important determinants of exposure to the risk of childbearing within marriage hence demographers' interest in the study of marital patterns.

A number of studies have attempted to explain and disentangle the theoretical considerations of the relationship of marital patterns and fertility. Despite the evidence that has been amassed in this context, the results of these studies are not conclusive and therefore not generalizable across countries or sub-groups within a country. Among others, one may note the following theoretical considerations and evidence of the relationship.

Age of first marriage and fertility. Alan Guttmacher Institute (1995) has noted that marriage at later ages allow women to prolong their education and delay first births, such women tend to have fewer families. Henry and Piotrow (1982) observed that age at first marriage is less important than in the past in determining fertility because deliberate contraception on a worldwide basis has now become the most important factor determining family size. However, using World fertility survey data from different countries, McDonald, Ruzicka and Caldwell (1981, cited in Clelland and Scott, 1987) showed that fertility declines with increasing age at marriage. In sub-Saharan Africa, except Zimbabwe, marriage patterns are most important in reducing fertility (Adlakha, Ayad and Kumar, 1991) or partly responsible in reducing fertility in certain countries (Locoh and Makdessi, 1996). In Pakistan, the age at which women became married for the first time contributed about 38.7% of the fertility decline between 1984 and 1988 (Khan, 1991).

Marital dissolution and fertility. The impact of divorce and widowhood on fertility varies from one population to the other. Divorce reduces the proportion of the reproductive period during which women are exposed to intercourse and consequently tend to have a depressing effect on fertility (el-Guindy, 1979). Marital dissolution tends to reduce fertility if re-marriage is infrequent or delayed (Burch, 1983). el-Guindy observed that the average number of children ever born was lower among divorced or widowed women in Egypt than among married women. Randall (1996) found evidence of lower fertility among divorced or widowed women than among maritally stable Bambara women in Mali. A high level of divorce has been linked to the spread of venereal disease and infertility among the Barma of the Republic of Chad (Reyna, 1975), and the Kanuri of north-east Nigeria (Udjo, 1987, 1989).

Polygyny and fertility. The polygyny-fertility hypothesis suggests that women in polygynous marriages have a lower fertility than women in monogamous marriages (Bean and Mineau, 1986). The analysis carried out on census data from several African countries, by Van de Walle (1968) did not find a clear confirmation of this hypothesis. On the other hand, Hern's (1992) analysis found a negative relationship between polygyny prevalence and community fertility in the Peruvian Amazon and in Tanzania, Timothy (1993) observed that fertility was higher in monogamously married women than among polygynous married women. However, Bean and Mineau (1986) using 19th century data of Mormons in Utah, found that although aggregate fertility of polygynous wives was lower than that of monogamous wives, fertility of the first wife in a polygynous union, was higher than that of a monogamous wife or second or later wife.

There is dearth of evidence about the relationship of marital patterns and fertility in South Africa. An examination of marriage patterns among the four main population groups in South Africa could provide insight into this relationship. In this regard, age at first marriage, prevalence of marriage and dissolution may provide important information. Similar to the practice in many other countries, the 1996 South African census did not ask a direct question about age of first marriage but included a question on current marital status at the time of the census. The objective of this study is to examine marital patterns and fertility in South Africa using information from the first post-apartheid census in the country.

¹ The views expressed in this paper are those of this author and do not necessarily reflect those of Statistics South Africa. I wish to thank Joyce Lestrade-Jefferis for editing the paper.

CONCEPTUAL ISSUES AND MEASUREMENT PROBLEMS IN THE ANALYSIS OF MARITAL PATTERNS

There are measurement problems in the analysis of marital patterns that should be taken into consideration in the interpretation of results. One of these problems relates to the definition of marriage. In non-western cultures, marriage is a process involving several stages that may take several years to complete (Radcliffe-Browne and Daryll Forde, 1950, cited in Van de Walle, 1968; Newell, 1986). By comparison, in western cultures, marriage is a single event at a particular point in time, which is usually defined by a legal or religious ceremony. As a consequence of the prolonged nature of the marriage process in non-western cultures, it is difficult to measure and compare results obtained from censuses and surveys among sub-groups in a population. Depending on the stage they have reached in the process of marriage, people may classify themselves as either married or not. This problem is compounded where no standard definition is provided during data collection. In the case of the South African 1996 census, no definition was provided to enumerators regarding the marital categories relating to the question "What is (the person's) present marital status?" Thus, a person's response was based on self-perception about marital status rather than on operational definitions of the marital categories provided during the census. This should be borne in mind in the interpretation of the results.

Cultural attitudes about marital status also need to be taken into consideration in the interpretation of the results. In many cultures including African cultures, there is social stigma attached to divorce. Census or survey based estimates may underestimate the extent to which divorce has occurred because some divorcees may report that they have never been married, or are widowed. The extent of this cultural stigmatization is not known in South Africa but should be borne in mind in the interpretation of the results in this study.

Van de Walle (1968) has noted that where legal minimum age at marriage exists, reports on marital status are sometimes incorrect and estimates based on these reports may be biased. This is because, persons under the minimum age but married may be reported single and thus bias upward the proportions reported single. The legal minimum age at marriage in South Africa is 12 years for females and 14 years for males. The results based on the 15-19 age group should therefore be interpreted with caution.

Migration could be a complicating factor in the analysis of marital patterns. The study by Desjardins (1995) did not find an effect of migration on the estimate of mean age at first marriage using French-Canadian data. But concluded that "no amount of empirical evidence can alter the fact that to estimate mean age at first marriage solely from data on spouses who had not migrated since birth is questionable, because a censoring bias might be present". Wrigley (1994) also did not find any effect of migration on his estimate of the mean age at marriage in English reconstitution data but the results of an earlier study using micro-simulation models by Ruggles (1992) were biased due to migration. In view of these findings, the impact of migration on the results presented in this study is an unknown factor but hopefully negligible. We now turn specifically to the present study.

DATA

The analysis in this study was based on the unadjusted 1996 South African census data (Census '96). The pertinent variables in this study from the relevant census questionnaires are age, sex, population group and marital status.

METHODS

There was no direct question on age at first marriage during the 1996 South African census. However, the household and personal questionnaires included the question: "What is this person's PRESENT marital status?" The categories provided as answer to this question were:

- Never married
- Married:Civil/religious
- Married:Traditional/customary
- Living with a partner
- Widower/widow
- Divorced/separated.

From the first category (i.e. proportions reporting they had never been married), the mean age at first marriage was indirectly computed using the method developed by Hajnal (1953). The resulting index is known as the singulate mean age at marriage (SMAM). According to Hajnal, the SMAM is an estimate of the mean number of years lived by a cohort of men or women before their first marriage. Assuming all first marriages have taken place by age 49, the singulate mean age at first marriage is expressed as

$$SMAM = \sum_{x=0}^{49} \{P_x - (50P_{45-54})\} / (1 - P_{45-54})$$

where P_x is the proportion single at age x .

The evaluation of the SMAMs were carried out by comparing the SMAMs with those estimated from age distributions. According to Van de Walle (1968) a simple overall dichotomy of the population into single and non-single can be translated into an age at marriage if an estimate of the age distribution is available. The method entails linear interpolation on a model or standard age distribution such that the cumulated standard age distribution equals the proportion single. In the present study, initial investigation was based on the interpolations on three age distributions namely:

1. the reported census 1996 age distributions,
2. age distributions based on Udjo's projections (1998)
3. and, a stable age distribution (Carrier and Hobcraft, 1971).

But in the final analysis, interpolations were only based on the reported census 1996 because the interpolations in the initial investigation produced identical results among Africans using the three different age distributions noted above.

There was no direct question during the census regarding whether persons had ever married, or were in polygynous marriages. Subtracting from unity, the proportion single and above 50 years assuming that first marriages beyond that age can be ignored (Van de Walle, 1968) provided a measure of the proportion ever marrying. Computing the ratio of currently married females to 100 married currently married males provided an index of polygyny. According to Van de Walle (1968), this provides a reliable index of polygyny if the population is not appreciably affected by migration.

Total marital fertility rates (TMFRs) were computed from estimated total fertility rates (TFRs) and model age specific fertility rates (ASFRs) given by Udjo (1999, 1999), and proportions currently married of ever-married women at the time of the census. The resulting TMFR is the number of children a woman would expect to have if continuously marriage throughout her reproductive life and experiences the model ASFRs.

RESULTS

Proportions single and age at first marriage

Table 1.1 shows the reported proportions single within each age group by population group and is illustrated in Figures 1.1-1.2. At the national level and similar to other populations, the reported proportion single is very high at the first reproductive age group (over 95% for both males and female). This is probably due to few marriages in that age group. However, unlike some other populations, the proportions single are high at the prime reproductive age period (20-39 years) such that of those aged 45-49 years in 1996, about 15% of males and 17% of females were reported still single.

A similarly high proportion single (20%) among females aged 45-49 was reported in the Family Health Survey II in Botswana in 1988 (See Central Statistics Office, Gaborone, 1989). In contrast, in a survey among the Kanuri of north-east Nigeria, no female was reported single at this age group in 1982 (Udjo, 1985) while in Zimbabwe, less than 2% of women were single at this age group in 1988 (Central Statistics Office, Zimbabwe, 1989).

Table 1 and Figures 1.1-1.2 appear to suggest two distinct age patterns of proportions single by population group in South Africa:

1. high proportions single at all ages among Africans and coloureds;
2. high proportions single at young ages and relatively low proportions single at middle and old ages. Note the striking congruence in the age pattern of proportions single among Indians and whites especially among males.

Table 1.1: Percent single within each age group and singulate mean age at marriage by population group

Male	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	20-49	50+	SMAM
African	99.3	93.5	73.1	47.3	31.5	22.5	18.1	15.1	55.3	12.1	32.0
Coloured	98.7	86.0	54.1	31.6	21.5	16.6	14.5	13.4	42.1	11.7	28.9
Indian	98.7	80.6	38.5	16.3	9.1	6.1	4.5	4.3	29.7	4.0	26.9
White	98.9	82.3	38.8	16.7	9.4	6.3	5.3	4.5	27.0	1.3	27.0
Total	99.2	91.4	66.4	41.1	26.7	18.9	14.9	12.2	49.6	9.9	31.0

Female	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	20-49	50+	SMAM
African	96.7	80.0	57.6	40.7	31.5	25.2	20.9	17.9	48.6	13.3	29.6
Coloured	96.8	76.7	48.1	31.5	22.8	18.5	16.0	14.3	39.2	12.2	27.9
Indian	94.8	58.3	22.1	10.9	8.3	7.5	7.6	7.5	21.0	7.3	23.9
White	96.1	62.1	23.8	11.1	6.9	5.4	4.4	3.9	19.2	3.8	24.6
Total	96.6	77.6	52.2	35.6	26.6	20.9	17.1	14.3	43.3	11.2	28.7

Figure 1.1: Percent single within each age group by population group – male

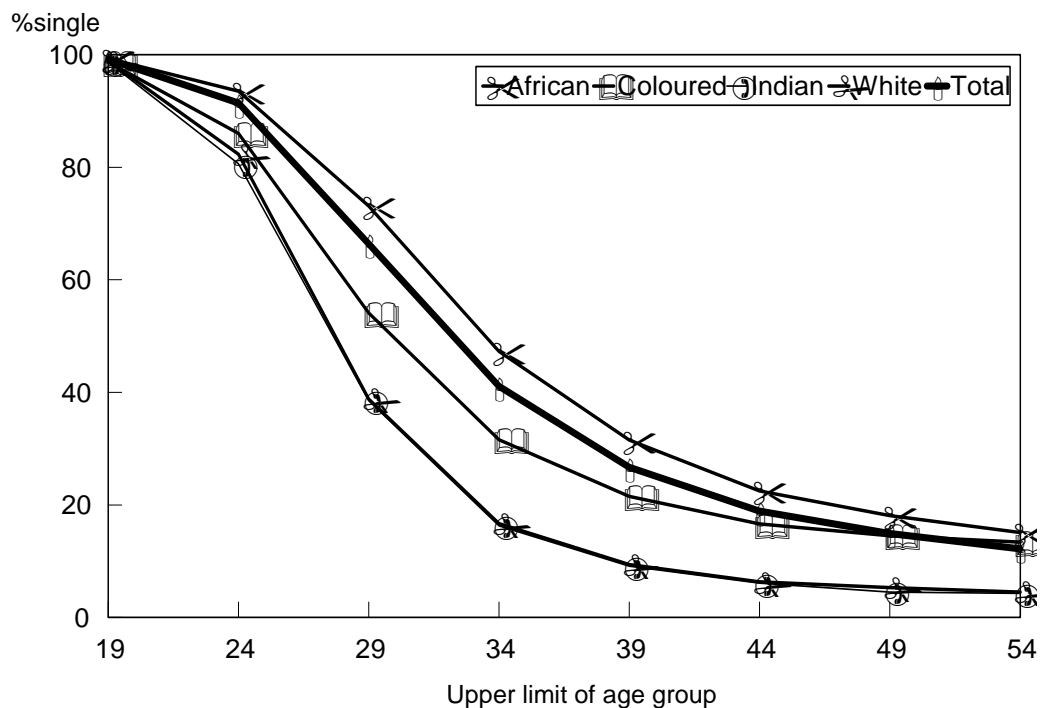
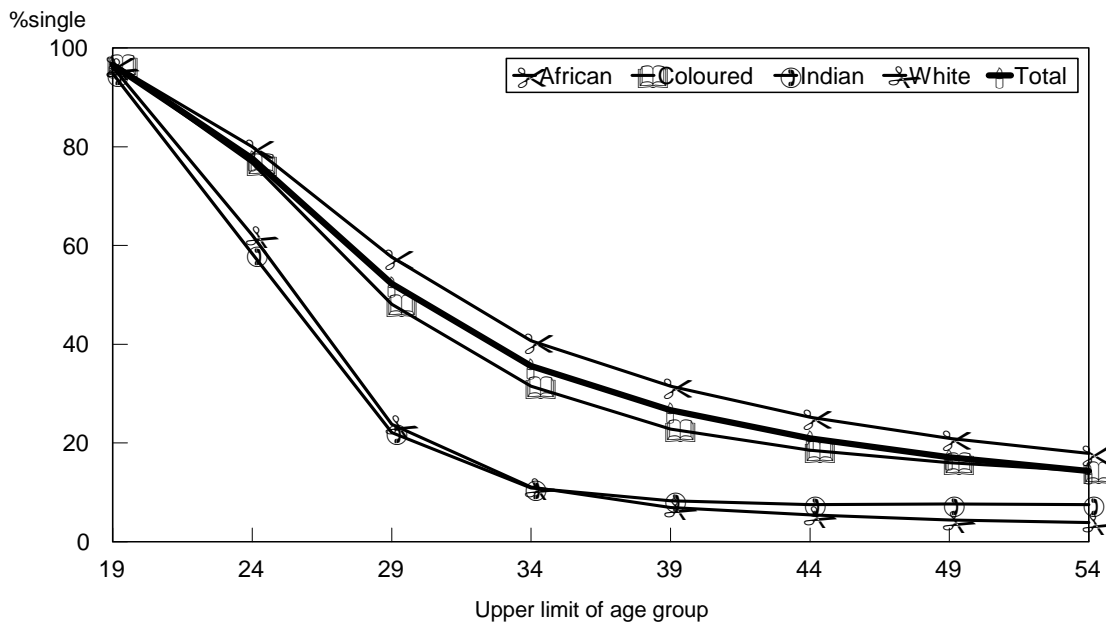


Figure 1.2: Percent single within each age group by population group - female



Consequently, the SMAMs in Table 1.1 indicate two distinct patterns: very late mean age at first marriage (over 27 years) among African and coloured males and females, and a moderately high mean age at first marriage (24-27 years) among Indians and whites. Since Africans constitute over three quarters of the population and the observed mean age at first marriage among Africans is very high, the national average is high (31 years for males and 28.7 years for females). The observed mean ages at first marriage suggest that on average among Africans, Indians and Whites, males tend to be 2-3 years older their spouses while among Coloureds, the difference in age at first marriage among spouses tends to be 1 year on average. These figures should however be interpreted with caution as they might reflect differences in the accuracy in marital status classification by sex and population group.

The reported proportions single within each age group and SMAMs by province are shown in Table 1.2. As can be seen from the table, the singulate mean age at marriage by province ranges between 28.6 years and 33 years among males, while among females, it ranges between 26.8 years and 31.0 years. Regardless of sex, the Free State appears to have the lowest SMAM while Kwazulu Natal has the highest. By world and African standards, and relative to the national average, SMAMs in Kwazulu Natal, Eastern Cape, the North West and Mpumalanga are very high. This may partly be a reflection of varying degrees of inaccuracies in the interpretation of the marital status question in these provinces during the census. It would appear from the differences in male-female SMAMs that men tend to be older than their spouses in Eastern Cape, Northern province and Gauteng to a greater extent compared with the other provinces when they marry the first time.

Table 1.2: Percent single within each age group and singulate mean age at marriage by province

Male											
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	20-49	50+	SMAM
Eastern Cape	99.4	94.8	75.9	52.1	35.5	25.2	19.3	15.6	58.2	10.7	32.9
Free State	99.0	87.1	52.6	25.6	15.2	10.9	8.8	7.6	37.7	6.4	28.6
Gauteng	99.0	88.9	61.5	36.1	22.5	15.3	11.8	9.6	43.8	8.0	30.1
Kwazulu Natal	99.3	93.4	74.9	53.6	36.9	25.7	19.7	15.0	58.2	12.5	33.0
Mpumalanga	99.2	92.5	68.6	41.5	25.7	18.4	15.0	12.7	50.7	11.2	31.0
North West	99.4	93.7	72.4	45.5	30.1	22.3	18.3	16.0	52.6	12.9	31.7
Northern Cape	98.8	88.4	61.9	39.9	28.6	21.6	18.5	15.7	47.3	13.3	30.3
Northern Province	99.0	92.0	67.9	38.1	22.8	15.4	12.0	9.9	53.3	7.7	30.7
Western Cape	98.9	88.0	57.5	32.7	21.0	14.8	12.0	10.3	42.5	8.5	29.5
Total	99.2	91.4	66.4	41.1	26.8	18.9	14.9	12.2	49.6	9.9	31.0
Female											
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	20-49	50+	SMAM
Eastern Cape	97.0	79.7	54.4	37.7	29.3	23.7	19.6	16.9	45.7	12.5	29.1
Free State	95.5	70.3	40.6	25.0	18.2	14.1	11.5	9.7	34.7	7.5	26.8
Gauteng	95.4	70.9	45.9	32.5	25.1	20.2	15.9	13.0	38.5	9.9	27.7
Kwazulu Natal	97.8	84.9	64.2	46.1	34.1	25.7	20.5	16.6	52.1	13.2	31.0
Mpumalanga	96.6	78.7	53.6	35.8	26.2	20.6	17.0	14.3	45.1	11.5	28.8
North West	97.6	82.3	57.0	39.0	29.7	23.9	19.8	17.4	47.7	13.9	29.5
Northern Cape	96.5	76.9	52.6	36.7	26.7	21.8	18.1	16.4	42.2	13.0	28.6
Northern Province	95.3	73.9	47.1	28.1	19.7	15.3	12.8	11.5	39.6	9.0	27.4
Western Cape	96.6	75.6	47.6	31.1	22.4	17.7	14.6	12.3	38.4	9.8	27.9
Total	96.6	77.6	52.2	35.6	26.6	20.9	17.1	14.4	43.3	11.2	28.7

Ever married persons

An indication of the prevalence of marriage among the population groups could be obtained by looking at the proportions ever married after the age when most first marriages are likely to have taken place.

Tables 2.1-2.2 and X2 show the percentage of persons aged 50 years and over who have ever married by sex, population group, and province based on Census '96 data. The patterns that emerge include the following:

1. Marriage is almost universal among Indians and whites particularly among males (Table 2.1). It is almost universal among both sexes in Guateng and the Northern province (Table 2.2);
2. a substantial proportion of Africans and coloureds (11% - 13%) never marry (Table 2.1). A substantial proportion of persons (13%) never marry in the Northern Cape, North-West and Kwazulu Natal (Table 2.2).

Table 2.1: Percent aged 50 years and over ever married by sex and population group

	African	Coloured	Indian	White	Total
Male	87.9	88.3	96.0	98.7	90.1
Female	86.7	87.8	92.7	96.2	88.8

Table 2.2: Percent aged 50 years and over ever married by sex and province

	Male	Female
Eastern Cape	89.3	87.5
Free State	89.3	92.5
Gauteng	92.0	90.1
Kwazulu Natal	87.5	86.8
Mpumalanga	88.8	88.5
North West	87.1	86.1
Northern Cape	86.7	87.0
Northern Province	92.3	91.0
Western Cape	91.5	90.2
Total	90.1	88.8

Marriage appears to be more prevalent among males probably due to low sex ratios: fewer men than women generally in the population implies that some women cannot marry unless they enter into polygynous marriage. The differentials in the tables should however be viewed within the context of the cultural factors explained above.

Marital dissolution

There are two important aspects to marital dissolution: divorce and widowhood.

Proportions divorced/separated

An indication of marital instability and dissolution in any population could be obtained by examining the proportions divorced. However, if re-marriage commonly takes place soon after divorce, this would understate the magnitude of marital instability and dissolution at any point in time. Because divorced and separated as responses to the question on marital status during Census '96 were combined into a single marital category, this may result in an exaggerated picture of marital dissolution since all separations may not end in divorce. On the other hand, in addition to frequent re-marriage, the magnitude of marital dissolution may be under-stated from census or survey data due to cultural factors. With these caveats in mind, let us now examine the magnitude of marital instability and dissolution as indicated by Census'96.

Table 3.1 shows the percentage of ever married persons divorced or separated within each age group by sex and population group, these distributions are illustrated in Figures 2.1-2.2. Overall, about 4% of ever married males and 6% of ever-married females were divorced or separated at the time of the census. Smith et al. (1984) has noted similarly low figures for some other African countries: Sudan 6%, Kenya 5%, Lesotho 5%, and Senegal 3% although the figures are not quite comparable since Smith's figures does not include separations.

Table 3.1: Percent divorced or separated within each age group by population group

MALE										
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	20-49	50+
African	2.4	1.6	1.9	2.7	3.7	4.4	4.6	4.4	3.5	3.5
Coloured	2.1	2.1	3.1	4.4	5.5	6.0	5.7	5.5	4.8	4.3
Indian	2.6	2.3	2.9	3.6	3.8	3.5	3.1	2.6	3.4	2.1
White	5.4	3.2	4.8	6.8	7.8	8.0	8.3	7.7	7.1	5.5
Total	2.7	2.1	2.7	3.7	4.6	5.2	5.4	5.2	4.3	4.0

FEMALE										
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	20-49	50+
African	2.2	2.2	3.3	5.3	7.3	8.7	8.6	7.8	6.1	4.7
Coloured	2.4	2.9	4.9	7.7	10.3	11.2	10.7	9.5	8.5	6.6
Indian	2.0	3.7	5.0	6.2	6.8	6.8	6.2	5.3	5.9	3.5
White	3.3	4.6	7.0	9.2	10.3	11.5	12.0	11.0	9.6	7.4
Total	2.3	2.7	4.1	6.2	8.1	9.4	9.4	8.6	7.0	5.4

Figure 2.1: Percent divorced or separated within each age group by population group - male

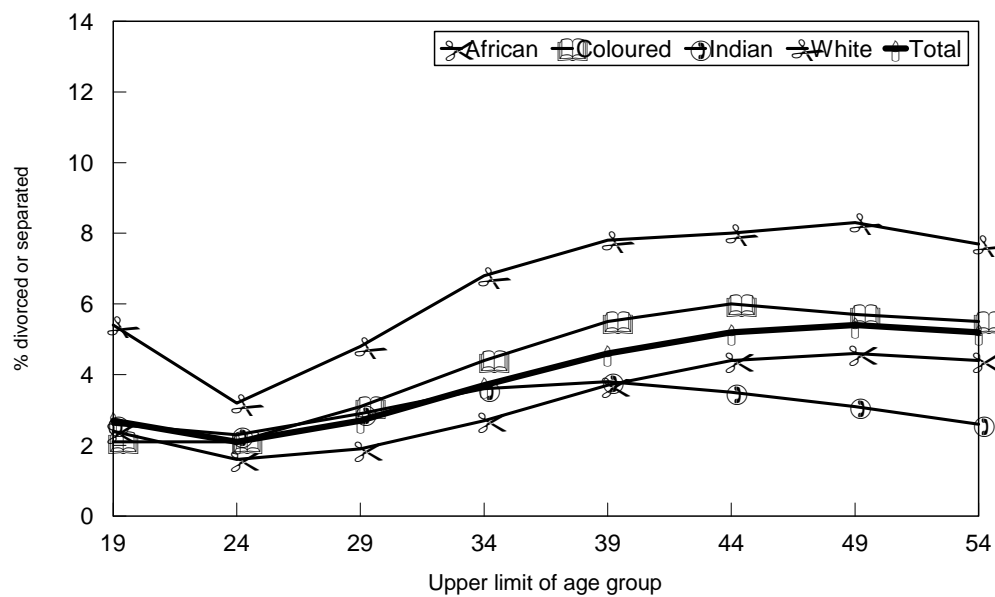


Figure 2.2: Percent divorced or separated within each age group by population group - female

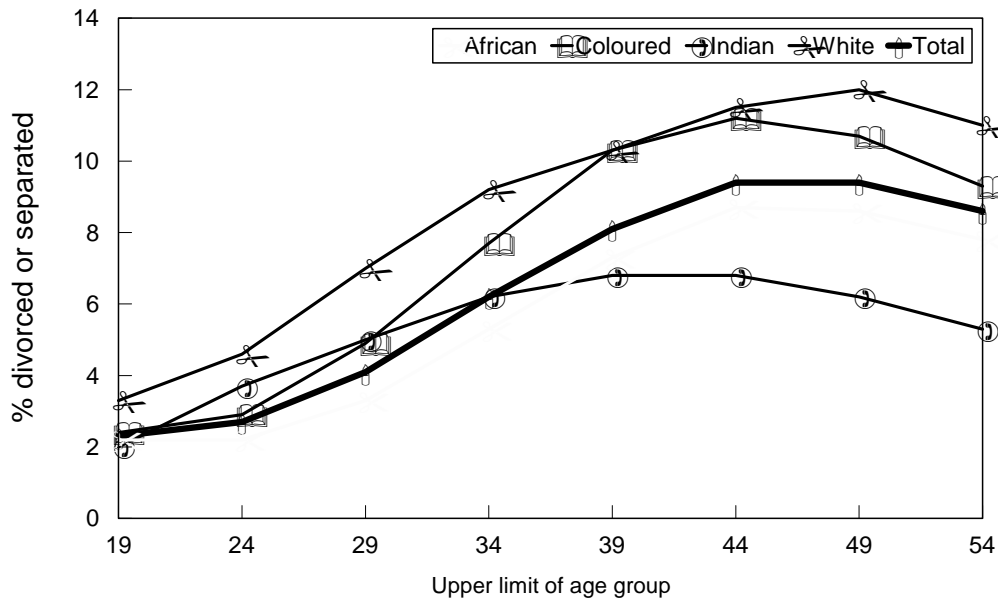


Table 3.1 and Figures 2.1-2.2 indicate that marital instability is more prevalent during the prime reproductive (age 20-39). It rises with age until late 30s, then levels off. This may be explained as follows. Above age 39 persons would have been in marital union much longer and would have had more children than younger women. Children may be a binding factor in long marital unions hence the seemingly more enduring marriages among those over 39 years of age.

The tables and graphs suggest that in each population group there are proportionately more divorced or separated women than men (except among Africans and Indians in the first reproductive age group). This pattern may be due to two factors: (1) at any age and relative to females, some men may have reported they were single when in fact they were divorced. (2) Due to the preponderance of females in the population in adulthood as evident from age-sex ratios, men are more likely to re-marry sooner than women are after a divorce.

At face value, Table 3.1 and Figures 2.1-2.2 seem to indicate that marriage is more stable among Indians and least unstable among whites compared to the other population groups.

With regard to the provinces, the age pattern of marital instability (Table 3.2) is similar to that among the population groups. Table 3.1 appears to suggest that marital unions are more stable in Kwazulu Natal compared with the other provinces.

Table 3.2: Percent divorced or separated within each age group by province

Male										
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	20-49	50+
Eastern Cape	2.5	2.2	3.2	4.5	5.9	6.9	6.7	6.3	5.6	4.1
Free State	3.9	2.8	3.6	4.8	5.6	6.2	6.3	5.8	5.3	4.6
Gauteng	2.0	2.6	3.5	4.7	5.5	6.0	6.0	4.4	5.0	5.0
Kwazulu Natal	2.2	1.8	2.3	2.7	3.2	3.4	3.5	3.2	3.0	2.6
Mpumalanga	3.5	1.9	1.9	2.5	3.2	3.8	4.0	4.1	3.1	3.4
North West	2.2	1.4	1.9	2.6	3.6	4.3	4.7	4.6	3.5	3.8
Northern Cape	1.6	1.3	1.7	3.2	3.8	4.4	4.4	4.3	3.5	3.3
Northern Province	2.5	2.2	3.4	3.9	4.6	5.2	5.5	5.1	3.1	3.4
Western Cape	2.9	2.2	3.1	4.6	5.8	6.4	6.3	6.2	5.2	4.8
Total	2.7	2.1	2.7	3.7	4.6	5.2	5.4	5.2	4.3	4.0
Female										
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	20-49	50+
Eastern Cape	1.3	2.3	3.5	5.1	6.5	7.3	7.2	6.4	5.6	3.9
Free State	2.6	3.6	6.2	9.7	12.1	12.7	12.3	10.6	9.8	6.6
Gauteng	1.5	2.2	4.2	7.0	10.3	13.2	14.1	13.1	8.7	9.0
Kwazulu Natal	1.5	2.1	2.9	3.7	4.6	5.3	5.3	5.0	4.2	3.1
Mpumalanga	2.5	2.0	2.5	4.1	5.8	7.3	7.3	6.8	5.0	4.5
North West	0.9	1.3	2.5	4.5	6.9	8.2	8.3	7.8	5.7	5.4
Northern Cape	1.3	1.8	3.1	4.9	6.8	7.5	7.5	6.7	5.7	4.5
Northern Province	5.0	5.0	6.0	7.7	8.4	8.6	8.0	6.9	7.4	4.3
Western Cape	2.1	2.8	5.1	8.0	10.5	11.8	12.0	11.2	8.9	7.7
Total	2.3	2.7	4.1	6.2	8.1	9.4	9.4	8.6	7.0	5.4

Proportions widowed

The proportions reported widowed within each age group by sex and population group during Census'96 are shown in Table 4.1. The table shows marked differences between males and females within each population group after the age group 20-24. Within each age group and population group, relatively more females are widowed than are males. Two factors may account for this: mortality is usually higher among males than female at any given age in human populations such that even if females married at the same age as males, one would expect a higher proportion widowed among females. But since women are generally younger than their spouses, the combination of both factors would create a higher proportion of widowhood among females than males.

Additionally, Table 4.1 indicates that until about age 39, the level of widowhood is almost the same among males in each of the population groups. Above age 39, the level of widowhood is higher among coloureds than the other population groups. On the other hand, Table 4.1 also indicates marked differences in widowhood among females in each of the population groups with African females showing the highest level of widowhood. Table 4.2 suggests a similar pattern as described above among males and females in the provinces. The moderate increase in widowhood from about the middle to the end of the reproductive period among females is also noteworthy. Widowhood among females in

Table 4.1: Percent widowed within broad age group among ever married by population group

MALE										
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	20-49	50+
African	2.5	0.9	0.5	0.6	0.9	1.4	2.1	3.3	1.1	7.7
Coloured	1.9	0.5	0.4	0.5	0.9	1.6	2.7	5.0	1.1	12.3
Indian	2.1	0.5	0.3	0.4	0.6	0.8	1.5	2.5	0.7	8.1
White	2.6	0.4	0.2	0.3	0.5	0.7	1.1	1.8	0.6	6.4
Total	2.4	0.7	0.4	0.6	0.8	1.3	1.9	3.1	1.0	7.8
FEMALE										
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	20-49	50+
African	1.3	0.8	1.5	2.8	5.0	8.3	12.5	18.1	5.2	34.2
Coloured	1.5	0.7	1.1	2.2	3.7	6.2	10.4	16.7	4.1	37.6
Indian	1.5	1.0	1.4	2.6	4.4	7.6	12.7	22.0	4.9	40.7
White	2.3	0.7	0.8	1.1	1.7	2.9	4.7	8.3	2.1	30.6
Total	1.4	0.8	1.3	2.4	4.3	7.1	10.8	16.0	4.5	34.0

Table 4.2: Percent widowed within broad age group among ever married by province

	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	20-49	50+
Eastern Cape	2.4	0.9	0.6	0.8	1.1	1.6	2.4	3.5	1.4	8.4
Free State	2.6	0.7	0.5	0.8	1.2	1.9	2.8	4.1	1.4	9.6
Gauteng	2.5	0.7	0.4	0.4	0.7	1.0	1.6	2.5	0.8	7.2
Kwazulu Natal	3.0	0.8	0.6	0.6	0.8	1.3	1.8	2.8	1.1	6.9
Mpumalanga	2.1	0.7	0.5	0.6	0.8	1.2	1.9	3.0	1.0	7.5
North West	2.2	0.5	0.5	0.6	0.9	1.2	2.1	3.4	1.0	8.5
Northern Cape	1.8	0.6	0.5	0.6	0.9	1.4	2.6	4.3	1.2	10.4
Northern Province	2.3	0.9	0.6	0.6	1.0	1.4	1.9	2.7	1.1	6.5
Western Cape	1.9	0.5	0.3	0.4	0.7	1.1	1.8	3.3	0.8	8.8
Total	2.4	0.7	0.5	0.6	0.8	1.3	1.9	3.1	1.0	7.9
Female										
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	20-49	50+
Eastern Cape	1.5	1.2	1.8	3.3	5.6	8.6	12.7	17.6	5.8	34.7
Free State	1.2	0.8	1.5	2.9	4.8	8.2	12.0	18.4	4.9	38.9
Gauteng	1.3	0.6	1.0	1.9	3.5	6.1	9.5	14.8	3.7	34.0
Kwazulu Natal	2.0	1.0	1.7	2.8	4.8	7.8	11.5	17.0	5.4	31.2
Mpumalanga	1.2	0.7	1.2	2.1	3.7	6.6	9.9	14.2	4.0	30.9
North West	1.5	0.6	0.9	1.8	3.5	6.1	10.1	15.1	3.9	35.0
Northern Cape	1.9	0.8	1.1	2.0	3.7	6.0	10.0	15.2	4.2	35.9
Northern Province	1.2	1.0	1.6	3.1	5.4	8.6	12.6	17.4	5.3	35.2
Western Cape	1.2	0.6	0.9	1.8	3.1	5.2	8.3	13.4	3.4	33.9
Total	1.4	0.8	1.3	2.4	4.3	7.1	10.8	16.0	4.5	34.0

each of the population groups and provinces increases sharply upward at age 40-44 probably because re-marriage is less common among females at this age range.

Overall in the provinces, Eastern Cape appears to have the highest level of widowhood compared to the other provinces (Table 4.2).

Polygyny

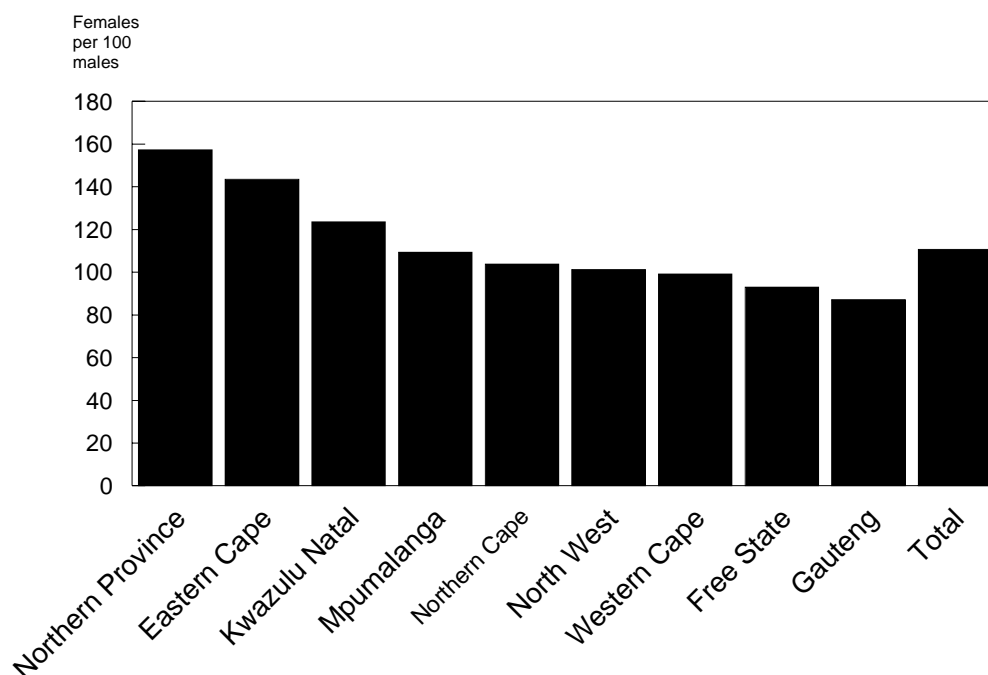
In the absence of a direct question about polygynous and monogamous unions, the number of currently married females per 100 married males, gives an indication of polygyny in a population. Table 5 shows this index for each of the population groups by type of marriage as computed from Census '96.

As can be seen from the table, there is no indication of polygyny among white males. On the other hand, the census data seems to suggest that African males who married according to traditional custom had 1.2 wives on average at the time of the census. Polygyny appears very negligible among coloureds and Indians.

Table 5: Currently married females per 100 married males by type of marriage and population group

Type of marriage	AFRICAN	COLOURED	INDIAN	WHITE
	Married women per 100 married men	Married women per 100 married men	Married women per 100 married men	Married women per 100 married men
Civil/religious	110.9	103.5	100.3	96.8
Trad/customary	122.2	105.9	101.6	96.0
Total	115.9	103.6	100.4	99.9

Figure 3: Currently married females per 100 married males by province



With regard to the provinces, Figure 3 suggests that polygynous unions are common in the Northern province, Eastern Cape and Kwazulu Natal. At the time of Census '96, males in these provinces had 1.5, 1.4 and 1.2 wives on average respectively. Polygyny appears negligible in Mpumalanga, Northwest and the Northern Cape. There was no evidence of polygyny in the Free State, Gauteng and the Western Cape from the census data.

Impact of the marital patterns on fertility

Several approaches can be used in examining the impact of marital patterns on fertility including the application of Bongaarts (1978) analytical model, Coale's (1977) indices, and multivariate regression models depending on the quantity and quality of the data. Since census data are usually limited in scope, the impact of marital patterns on fertility in South Africa was examined in this study by comparing TMFRs with TFRs. The differences between the two sets of rates indicate the effect of non-marriage, age at marriage and intervals between marriages on fertility (see Hill et al, 1982 for details).

Udjo (1999, 1999) has given estimates of TFRs in South Africa for the year 1996 as shown in Table 6. When these were compared with the estimated TMFRs during the same period (see Table 6), the results suggest that TMFR was about 26% higher than TFR at the national level in 1996. Also during the same period, TMFR was higher than TFR by about 27%, 30%, 10% and 17% among Africans, coloureds, Indians, and whites respectively. However,

Table 6: Total marital fertility rates (TMFR) and total fertility rates (TFR) by population group in 1996

	AFRICAN	COLOURED	INDIAN	WHITE	TOTAL
TMFR	5.1	4.0	3.0	2.3	4.3
TFR	3.7	2.8	2.7	1.9	3.2

when the effect of living with a partner on fertility is taken into consideration, the difference between TMFR and TFR reduces drastically from 26% to 9% nationally in 1996; among Africans, coloureds and whites the difference reduces to about 10% with very little change among Indians during the same period. These figures suggest that fertility is not hugely reduced by the waiting period between marriages (after divorce/separation) since there appears to be substantial childbearing during co-habitation (living with a partner).

DISCUSSION

The observed overall SMAMs (28.7 years for females and 31.0 years for males) are very high in comparison with observed values from some other African countries. For example, the median age at first marriage in Senegal among women aged 20-49 in 1992-93 was 16.6 years (Ndiaye, 1994). In Tanzania, it was 18.2 years among women aged 25-49, and 25 years among men in 1996 (Tanzania Bureau of Statistics, 1997). In Zimbabwe, it was 18.6 years among women aged 25-49 in 1988 (Udjo, 1996). Although the above, figures are not SMAMs, and the reference periods are not comparable, the differences between South Africa and some other African countries is striking - especially the figures for Africans and Kwazulu Natal province. Furthermore, Woods (1979) observed that it is now extremely difficult to find examples of national populations that have a late age at marriage (late 20s or 30s).

In view of the above, an evaluation of the observed SMAMs was attempted; the following should first be noted before discussing the results. In theory, SMAM should produce an accurate measure of the mean age at first marriage because the question from which the SMAM is estimated is usually asked of the current period i.e. at the time of the census (or survey). It is thus likely that other things being equal, SMAMs would be accurately reported. However, SMAMs could be vulnerable to age mis-reporting. If severe age distortions are present, they would be expected to have some bias in the estimates of SMAMs. As noted above, Van de Walle (1968) has suggested a method for minimising the effect of age mis-reporting on the estimate of SMAM. It entails a simple overall dichotomy of the population into single and non-single and interpolation on a standard age distribution as described above.

The results of the application of the method to the reports by Africans are shown in Table 7. As can be seen from the table, the estimates based on the three age distributions were identical for both males and females but the corresponding values for males and females are higher than those observed.

Table 7: Observed singulate mean age at marriage and from age distributions, African

	Based on reported Age distributuon¹	Based on projected age distribution²	Based on Stable population³	Observed SMAM
Males	34.7	34.7	34.7	32.0
Females	32.2	32.2	32.4	29.6

Sources:

1 Census 1996, Stats SA

2 Udjo (1998)

3 Carrier and Hobcraft (1971)

If the inconsistency between the observed SMAMs and those obtained from age distributions were due to age mis-reporting one would have expected discrepancies in the estimates based on age distributions. This would suggest that the high values of the SMAMs and the differences between the observed and age distribution based estimates are not attributable to age-misreporting. In view of the identical results obtained from the estimates based on the three age distributions, further analysis was confined to the observed SMAMs and those based on the census '96 reported age distributions. The comparison of the results by sex and population group is shown in Table 8.

As can be seen from the table, the SMAMs estimated from the reported age distributions are also very high particularly - among Africans and coloureds. They are about 2-3 years higher than the observed values among Africans and coloureds while among Indians and whites they are about 1-2 years higher than the observed values. Comparative figures of mean age at first marriage for females for selected countries world-wide are shown in Table 9. Although the reference periods are not comparable, the figures for females in other countries give the impression that South Africa has about the highest age at first marriage in the world.

Table 8: Observed and age distribution based singulate mean age at marriage by sex and population group

	Male	Female
AFRICAN		
Based on age distribution	34.7	32.2
Observed	32.0	29.6
Difference	2.7	2.6
COLOURED		
Based on age distribution	32.0	30.7
Observed	28.9	27.9
Difference	3.1	2.8
INDIAN		
Based on age distribution	27.7	25.5
Observed	26.9	23.9
Difference	0.8	1.6
WHITE		
Based on age distribution	29.1	26.8
Observed	27.0	24.6
Difference	2.1	2.2

Cultural factors may be responsible for the high values of SMAMs especially among Africans, and in Kwazulu Natal. (Note that according to the final results of Census '96 Africans constitute about 77% of the South African population. Kwazulu natal province has the largest proportion of the South African population [21%] and of Africans [22%] compared with the other provinces). Among Africans, marriage is usually a process and until the different stages have been completed, culturally, marriage has not been contracted. Since the process could take several years, many persons would be in this state, hence the high proportions of single persons and mean age at first marriage. Also, a number of persons may have reported they were single in response to the question about current marital status when in fact they were divorced perhaps due to cultural attitudes about divorced. Their understanding of the question about marital status is another factor. If one were asked: what is this person's marital status? Inadequate understanding of the question could produce the answer, "currently single" because the person is currently living as a single person after a divorce or death of spouse. Without further probes, such persons will be coded as "never married" rather than "divorced" or "widowed".

Table 9: Female mean age at first marriage in selected countries

COUNTRY	Age at first marriage	Reference period
AFRICA:		
Benin	18.3	1982
Botswana	26.4	1981
Ghana	19.4	1971
Nigeria	18.7	1981-82
South Africa	28.7	1996
Uganda	17.7	1969
Zambia	19.4	1980
Zimbabwe	20.4	1982
LATIN AMERICA:		
Argentina	22.9	1980
Brazil	22.6	1980
Chile	23.6	1982
Cuba	19.9	1981
Guyana	23.7	1980
Mexico	20.6	1980
Venezuela	21.2	1981
ASIA:		
Afghanistan	17.8	1979
Bangladesh	16.7	1981
China	22.4	1982
Hongkong	25.3	1981
India	18.7	1981
Iran	19.7	1976
Singapore	26.2	1980
Thailand	22.7	1980
DEVELOPED COUNTRIES:		
Australia	23.5	1980-85
Canada	23.1	1980-85
Denmark	25.6	1980-85
Ireland	23.4	1980-85
Japan	25.8	1980-85
Sweden	27.6	1980-85
Switzerland	25.0	1980-85
United Kingdom	22.7	1980-85
United States	23.3	1980-85

Source (except South Africa): Royston E and Zahr C. A (1991)

As indicated in Table 8, the SMAMs derived from the reported age distributions are higher than those observed. In addition to cultural factors, the SMAMs based on reported age distributions may have been affected by an additional bias. Since the method entails a simple overall dichotomy of the population into single and non-single, some older persons who were widowed may have reported they were single. Note that the observed SMAM is conventionally derived from information obtained of persons less than 50 years old, while the method based on a simple dichotomy of the population into single and non-single is based on information from all ages in the population. Incorrect categorization of marital status is therefore more likely to have a larger bias in the estimate of SMAM in the latter method than in the conventional method. Reporting errors in the proportions never married due to cultural factors or the understanding of the question on marital status may not be confined to the estimates of SMAMs. Computations based on persons reported in other marital categories may also be affected since people may have been shifted from such categories.

The comparison of TMFRs and TFRs suggests that non-marriage, age at marriage and intervals between marriages have a substantial impact on fertility, this impact is however mediated by cohabitation in between marriages.

CONCLUSION

It is difficult to draw firm conclusions from the results in this study. However, one may note the following.

The age at which people marry in South Africa is on average much higher than the legal minimum age at marriage. Comparison of the female mean age at first marriage estimated in this study with measures of age at first marriage in other countries at different time periods, give the impression that South Africa has about the highest mean age at first marriage in the world. The high values of mean age at first marriage observed from Census '96 may have been biased upward and it is unlikely that the bias was due to age mis-reporting. Cultural factors such as the definition of marriage, attitude about divorce and understanding of the question about marital status may have played a part in the probable bias.

On average, Africans and coloureds appear to marry at a later age than Indians and whites, the first time. People appear to marry at an earlier age in the Free State and at later age in Kwazulu Natal compared to others in the other provinces. Indians and whites appear to have a similar magnitude and age pattern of proportions single but which are different from those of Africans and coloureds. Marriage is almost universal among Indians and in Guateng and the Northern Province. In general, marriage appears to be more stable among Indians compared with the other population groups.

With regard to male female differentials the following may be noted: Among Africans, Indians and whites, it appears that men are older than their spouses by about 2-3 years on average when they marry the first time whereas among coloureds, women tend to be younger than their spouses by about 1 year.

Widowhood appears to be more common among females at any given age than men and African females show the highest level of widowhood compared to women in the other population groups.

Total fertility rate in South Africa in 1996 would probably have been 4.3 instead of 3.2 were it not for the late age at first marriage, the substantial proportion of Africans and coloureds who never marry, and the time intervals between marriages. These general observations however need to be confirmed by further studies.

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