EXAMINING THE EFFECT OF CHANGING MARRIAGE PATTERNS ON FERTILITY AMONG AFRICAN SOUTH AFRICAN WOMEN

By

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Declaration

Submitted in fulfilment/ partial fulfilment of the requirements for the degree of **Masters of Population Studies**, in the Graduate Programme in the **School of Development Studies**, University of KwaZulu-Natal, Durban, South Africa.

I declare that this dissertation is my own unaided work. All citations, references and borrowed ideas have been duly acknowledged. It is being submitted for the of Masters of Population Studies in the Faculty of Humanities, Development and Social Science, University of KwaZulu-Natal, Durban, South Africa. None of the present work has been submitted previously for any degree or examination in any other University.

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Student signature

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Date

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Abstract

Recent studies on marriage patterns in South Africa have revealed a clear trend towards decreasing proportions of married women and an increase in age at first marriage (Udjo, 2001; Budlender et al., 2004). Despite marriage being one of the most important proximate determinants of fertility, the role of these nuptiality changes on the country's decreasing fertility levels has not been adequately explored. Using data from the 1998 South African Demographic Survey, this paper fills this research gap by examining the marriage and fertility trends among African women in South Africa. The decision to focus on African women hinged on two basic factors; (1) available evidence shows that changes in marriage patterns are most notable in this racial group, and (2) African women have the highest fertility level relative to other racial groups. The results show that marriage patterns have been changing over time. The proportions married are low and late among African and rural women. There is an increase in the proportion of women who are cohabiting and never-married. Fertility levels are different for marital status, with the married and widowed women having the highest mean number of children ever born and the least number of children ever born is among the never-married women. Furthermore, the mean number of children ever born is among the highest in the older ages for all women. Kaplan-Meier estimates indicate that half of the divorced and widowed women have their first birth as early as age 18 years, compared to age 20 for the never-married and the cohabiting women, and age 22 for the married women. The mean age at first birth for African women is 19.7 years compared to 21.2 years for non-African women. Overall, socio-economic and demographic factors such as educational attainment, place of residence, marital status, race, and age have a significant effect on the age of a woman at first birth.

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List of Acronyms

AGI	Alan Guttmacher Institute
CEB	Children Ever Born
CI	Confidence Interval
DHS	Demographic and Health Survey
DoH	Department of Health
DTT	Demographic Transition Theory
HR	Hazard Ratio
LLR	Log Likelihood Ratio
OHS	October Household Survey
SADHS	South African Demographic Health Survey
SDTT	Second Demographic Transition Theory
SMAM	Singulate Mean Age at Marriage
TFR	Total Fertility Rate
TMFR	Total Marital Fertility Rate

CHAPTER 1

Introduction

1.1 Introduction

Until recently, not much was known about South African demography. Demographic events, such as marriage, fertility, and mortality were not examined by the apartheid government. However, more detail on South African demography emerged in 1994 when the new government came into place. The collection of data in the 1998 South Africa Demographic and Health Survey (DHS) opened up many avenues for substantive research into the recent demographic trends that were previously restricted through lack of data. Different levels of fertility and marital patterns were observed among different racial groups, but the relationship between these two demographic phenomena was debated (Udjo, 2001). He debated that the exposure to the risk of childbearing in any population is determined by marital stability and dissolution. The study aims to examine the trends of marriage and other forms of union over-time, and to explore their implications on fertility.

The chapter starts by providing a brief background on marriage and fertility in Section 1.2 and 1.3 respectively. Then marriage patterns and fertility are presented in Section 1.4. The rationale of the study is presented in Section 1.5 and the purpose for this study can be found in Section 1.6. The research questions that guide this study are outlined in Section 1.7. Finally, the overview of dissertation is presented in Section 1.8.

1.2 Background: Marriage Patterns

Generally, it is believed that marriage in Africa is a universal institution, but in South Africa recent studies on marriage patterns show that marriage is not universal (Kalule-Sabiti et al., 2007; Budlender et al., 2004; Ziel, 2001, and; Udjo, 2001). Marriage patterns have been changing over time. Increasingly, research in South Africa on marriage patterns found that the proportion of women married has decreased from 35 percent in 1995 to 30 percent in 1999 (Budlender et al., 2004), and further to 28 percent in 2003. The decline in the proportions married is likely to be driven by the proportion of women who do not marry. The proportions never-married and cohabiting, on the other hand, have been increasing. Budlender et al (2004) observed this increase from 1995, with 58 percent to 60 percent in 1999 for the never-married women where the proportion cohabiting increased gradually from 4 percent in 1995 to 7 percent in 1999. These proportions further increased to 63 percent for the never-married and 9 percent for the cohabiting women in 2003 (South Africa DHS, 2003).

Racial grouping is an important determinant of marriage patterns in South Africa. This suggests that differences in marriage patterns, between racial groups, are structurally and culturally driven. Marriage was almost universal among whites and Indians with 95.3 and 91.8 percent of women aged 50 and above, respectively, being married during the period 1995 to 1999 (Budlender et al., 2004). Furthermore, Kalule-Sabiti et al (2007) analyzed the proportion of married women within each five-year age group using the 2001 census data. They found white and Indians were more likely to be married than coloureds and African women, with 60.5 and 55.2 percent for white and Indian women respectively compared to 40.1 and 37.8 percent for coloured and African women respectively (Kalule-Sabiti et al., 2007). The low proportions married among Africans are most likely driven by the payment of bridewealth (van de Walle, 1993).

Urban rural differentials in marriage further reveal that traditional marriages are more prevalent in rural areas than urban areas. This is not surprising given that African people dominate in rural areas. Even the census and OHS data showed that traditional marriages are generally more common among rural dwellers than civil marriage (Budlender et al., 2004). Traditional marriages account for less than 20 percent of all marriages in urban areas (Budlender et al., 2004).

1.3 Background: Fertility

Increasingly, research in developing countries showed that fertility started to decline in the late 1980's and 1990's, especially in the regions of Asia and Latin America (Swartz, 2004). However, sub-Saharan Africa still lags behind in terms of fertility decline. South Africa has been found to display demographic regimes that are typical of both developed and developing countries, but its experience in the fertility transition is among the most advantaged in sub-Saharan Africa (Swartz, 2004). South African fertility was high and stable between 1950 and 1970, with an average of 6 to 7 children per woman. However, it declined to an average of 4 to 5 children per woman between the period of 1980 to 1995 (United Nations, 95). This is likely to be associated with the socio-economic factors, racial and urban-rural differentials.

Fertility in South Africa began to decline among all racial groups prior to the end of apartheid. The decline occurred at a faster level for whites and Indians compared to coloureds and Africans. Whites experienced a sustained fertility decline below replacement level, with a total fertility rate (TFR) of 1.9 children per woman from the end of the nineteenth century until 1989. The rate has been constant ever since. Indians on the other hand experienced fertility decline from a TFR of 6 children per woman in the 1950's to 2.7 children per woman in the 1980's and 2.5 children per woman in the mid-1990, which is close to replacement level. Coloureds experienced fertility decline from a TFR of 6.5 children per woman in the 1960's to 3 and 2.5 children per woman in the 1980's and 1990's respectively. Africans, especially women, are the most disadvantaged population group, with approximately 80 percent of the country. Their TFR declined

from 6.6 children per woman in 1960's to an average of 4 to 5 children per woman in the 1980's (Department of Population and Social Development, 1998, Chimere-Dan, 1993, 1999; Moultrie & Timæus, 2003; Sibanda & Zuberi, 1999; Udjo, 1998, 2003). In 1990, fertility levels for Africans stood at an average of 3.3 children per woman.

The above differences in fertility levels among racial groups are driven by the politics under apartheid. The past fertility levels and trends were estimated for all South Africans and for African South African women separately (Moultrie and Timaeus, 2003). Furthermore, Caldwell (1970) noted, the South African policy initiatives almost invariably came from the white population due to their demographic similarities with those of developed countries. The only difference was that the white population formed an enclave in a country with a larger nonwhite population, influencing political and personal behavior. Policies of the apartheid government promoted industrialization and urbanization among the minority white population. This impacted on the African population within the first four decades of the century as they were not familiar with family planning programmes. In 1993, Caldwell and Caldwell identified a difference in South African fertility and suggested that the widespread community and political resistance existed due to the government's family planning programme (Caldwell and Caldwell, 1993).

Despite the role that the apartheid government played on family planning programmes, fertility decline has been a remarkable demographic achievement in South Africa (Caldwell & Caldwell, 1993, 2003; DoH, 1998). Presently, South Africa is one of the countries with the lowest levels of fertility in Africa, with an average of 2.9 children per woman. This achievement was driven by the fear that rapid population growth would undermine South African economic development.

In recognition of the lack of understanding of the changing dynamics on family formation, the World Fertility Surveys (WFS) and Demographic and Health Surveys (DHS) have changed their principal respondents from focusing only on married women aged 15 to 49 to include other union statuses (never-married, cohabiting, widowed and divorced women) of the same age. This allows a comprehensive study on marriage and fertility as it includes all women aged 15 to 49 at risk of childbearing. Therefore, the effect all these marital statuses on childbearing are therefore taken into consideration.

1.4 Background: Marriage Patterns and fertility

It is well established in the demographic literature that marriage is a proximate determinant of fertility (Bongaarts, 1978). Among other proximate factors, marital stability and dissolution make women vulnerable to the risk childbearing. Therefore, studying fertility in different marital contexts allows sociologists to gain insight into, not only how people make decisions about childbearing, but also how these children fit into the process of both family formation and individual identity development.

Prior research has attempted to explain the theoretical considerations of the relationship between marital patterns and fertility (Coale, 1977; Burch, 1983, and; Adlakha et al., 1991). Despite the collected evidence in this relationship, the results of these studies are not conclusive. The theoretical considerations and evidence of the relationship between marriage patterns and fertility are explained by the age at first marriage, age at first birth, proportions marrying, proportions cohabiting, proportions divorcing and widowed.

1.4.1 Age at first marriage and fertility

Early marriage typically coincides with childbearing at younger ages. Bledsoe and Pison (1994) found that the majority of adults in most sub-Saharan countries refer to marriage as a life course since it serves as a near-universal indicator of entry to adulthood and is also childbearing point. The 1990 Demographic and Health Survey showed that more than half of all women aged 20 to 24 in sub-Saharan Africa married before age 20 and

their first births occurred two years after they had entered their first marriage (Singh and Samara, 1996).

South Africa is found to be revealing late marriage (Udjo, 2001; Ziel, 2001, and; Budlender et al., 2004). Furthermore, Alan Guttmacher Institute (1995) noted that late marriage allows women to prolong their education and delay first births. As a result, such women are likely to have fewer children. In sub-Saharan Africa, except in Zimbabwe, it has also been observed that marriage patterns are most important in reducing fertility (Adlacka et al, 1991). Furthermore, Mcdonald, Ruzicka, and Caldwell (1981, cited in Clelland and Scott, 1987) showed that fertility declines with increasing age at marriage. They observed this using the World Fertility Survey data from different countries.

1.4.2. Marital dissolution and fertility

As mentioned earlier, racial groups in South Africa provide insight into the relationship between marriage and fertility. The impact of divorce and widowhood on fertility differs across racial groups. This is in the expected direction given that marriage is more universal and early among whites and Indians compared to Africans and coloureds (Budlender et al., 2004). As often cited by Udjo (2001), early marriage is associated with high divorce rates. El-Guindy (1979) found that divorce tends to have a depressing effect on fertility. That is, divorce and widowhood reduce fertility in cases where re-marriages are delayed (Burch, 1983). This is in the expected direction given that marriage is clearly the preferred context for bearing children (Caldwell, 1976).

The South African case is unique. Re-marriages are occurring at a lower scale (Udjo, 2001) especially among Africans. Due to the increasing levels of births taking place outside wedlock and increasing proportions of never-married and cohabitation unions, the divorced and widowed women are either single or cohabiting. However, this does not reduce their fertility level as they are still exposed to the risk of childbearing outside wedlock. This is likely to result in the highest mean number of children ever born among divorced and widowed women.

1.4.3 Cohabitation and fertility

The impact of cohabitation on fertility varies from one racial group to the other. It has been observed that cohabitation is increasingly becoming common among Africans in South Africa. Growth in non-marital fertility is governed, at least in part, by the growth in cohabitation.

Overall, marriage patterns and fertility in South Africa reveals a clear trend towards decreasing proportions of married women, increasing proportions of never-married and the cohabiting women, a rise in age at first marriage and an increase in the number of children born out of wedlock (Udjo, 2001; Ziel, 2001; Budlender et al., 2004, and; Garenne et al., 2000). Many demographers have conducted research on marriage patterns and trends, but not in relation to fertility (Budlender et al., 2004; Ziel, 2001). Udjo (2001) conducted a study on marriage patterns and fertility in South Africa, but his attempt looked at factors that affect non-marital fertility. Despite the dramatic decline in proportions married and the increase in proportions never-married and cohabiting, and the impact marital dissolution has on fertility, the majority of African women are experiencing early first births outside marriage. Therefore, this is an important consideration as patterns of late marriage and births occurring out of wedlock require further understanding of the context in which delayed marriage, and other forms of union, affect fertility.

1.5 Rationale of the study

Marriage patterns are of great importance to the institution of the family. Despite marriage being one of the most important proximate determinants of fertility, the role of these nuptiality changes on the country's decreasing fertility levels has not been adequately explored due to limited research on marriage and fertility. Using data from the 1998 South African Demographic Survey, this research fills this gap by examining the effect of changing marriage patterns on fertility among African women in South Africa.

1.6 Research Purpose

The purpose of the current study was to examine the effect of changing marriage patterns on fertility among African South African women, by determining how age at first birth and levels of fertility differ between the married, never-married, cohabiting, widowed and divorced women. The decision to focus on African women hinged on two basic factors, namely, (1) available evidence showing that changes in marriage patterns are most notable in this racial group, and (2) African women indicating the highest fertility level relative to other racial groups.

1.7 Research Questions

The specific research questions guiding the current study are as follows:

1. How have marriage trends and other forms of unions changed over time?

2. What is the relationship between marriage and fertility among African women in South Africa?

1.8 Overview of dissertation

Chapter two reviews literature, providing a theoretical background on marriage patterns and fertility in South Africa. This chapter has sections on marriage definition over time, marriage trends and levels, marriage differentials in South Africa and marriage as proximate determinant of fertility. The chapter further highlights factors that influence the change in marriage patterns on fertility.

Chapter three give a description of the research methodology and methods. The 1998 South Africa Demographic and Health Survey is used to ascertain prevalence and timing of marriage. Measures of fertility, and measures of association between marriage and fertility, are also discussed in this chapter.

Chapter four summarizes the grouped data and the results of the analysis (i.e. research findings), and discusses the research findings by providing direct answers to the research questions as clarified in Section 1.7.

Chapter five presents a summary of major findings by indicating the theoretical and practical implications of the study. The chapter further presents the achievements of the study and outlines what was not achieved. It also suggests further research on the relationship between marriage and fertility. Finally, the suggestions for possible future research are presented, and conclusions are made.

CHAPTER 2

Literature Review

2.1 Introduction

The aim of the study is to examine the effect of changing marriage patterns on fertility among Black South African women. Chapter 2 reviews literature on marriage patterns and fertility from other studies.

2.2 Why study marriage patterns and fertility in South Africa?

Demographically, South African data on marriage and fertility has been hampered by inadequate censuses and vital registration data relating to the African population for most of the last century. The South African data sources only introduced questions on marriage and fertility in the late nineteenth century. Marriage patterns have been found to have important implications on fertility levels of South Africa. According to Singh and Samara (1996), the timing of first marriage or union is an important dimension of women's reproductive behaviour, particularly for their reproductive health and socio-economic status. Fertility rates are affected by the proportion of women who marry and the age at which they marry, since childbearing is expected to occur within marriage. However, in South Africa, this is not the case. Age at which a woman marries is delayed.

Theoretical Framework

The study draws from two theories in order to explain women's reproductive behaviour: (1) Demographic Transition Theory (DTT) gives a brief description of how South African fertility declined; (2) Second Demographic Transition Theory (SDTT) explains this fertility decline with factors such as urbanization, education, and other socio-economic variables, such as the expense of marriage. In conclusion, these two theories

are combined to explain why marriage is delayed in South Africa and to what extent this is related to early and late childbearing.

2.2.1 Demographic Transition Theory (DTT)

The DTT was formulated by the office of Population Research in Princeton based on previous work on The Future Population of Europe and the Soviet Union, published in 1944 on behalf of the League Nations (Kirk, 1996, p.363). The DTT refers to the historical declines in fertility, as witnessed from the 18th Century onwards in several European populations, and continuing presently in most developing countries (Lesthaeghe, 1983). DTT suggests that the shift towards a low fertility rate will only occur when there is a process of overall modernization, resulting from urbanization, education, empowerment of women, substantial overall socio-economic development, access to family planning services and the expense of marriage.

In most African countries, including South Africa, the proportion married for African women used to be higher and childbearing was mainly occurring within marriage. South Africa is one of the countries that have always been characterized by high rates of male migrant labour which used to play a role in the levels of fertility (Swartz, 2004). Historically men would pay bridewealth in cattle for their women and as expected, women were bearing children for their husbands (Swartz, 2004). While this was the case, men/husbands were migrating to the cities for work to support their families, then come back after year (due to the laws of migrant labours) and impregnate their wives again. This led to high fertility levels within the marriages of migrant labourers.

The age at which these women marry was early and marriage mostly preceded first birth (Singh and Samara, 1996). A study by Singh and Samara (1996) further found that most of the births (including first birth) to married women were occurring within two years of marriage. However, in cases where first birth preceded marriage, these births were traditionally defined as illegitimate (Singh and Samara, 1996). For instance, never-married women who fell pregnant were, by tradition, required to report the responsible man, so that take responsibility by marrying the women. As a result, these women were

expected to bear children for as long as they are in a marriage (Singh and Samara, 1996). Overall, this tradition impacted on the early age at first marriage which summed to the high proportions married and high fertility levels among the African married women during the first DTT.

2.2.2 Second Demographic Transition Theory (SDTT)

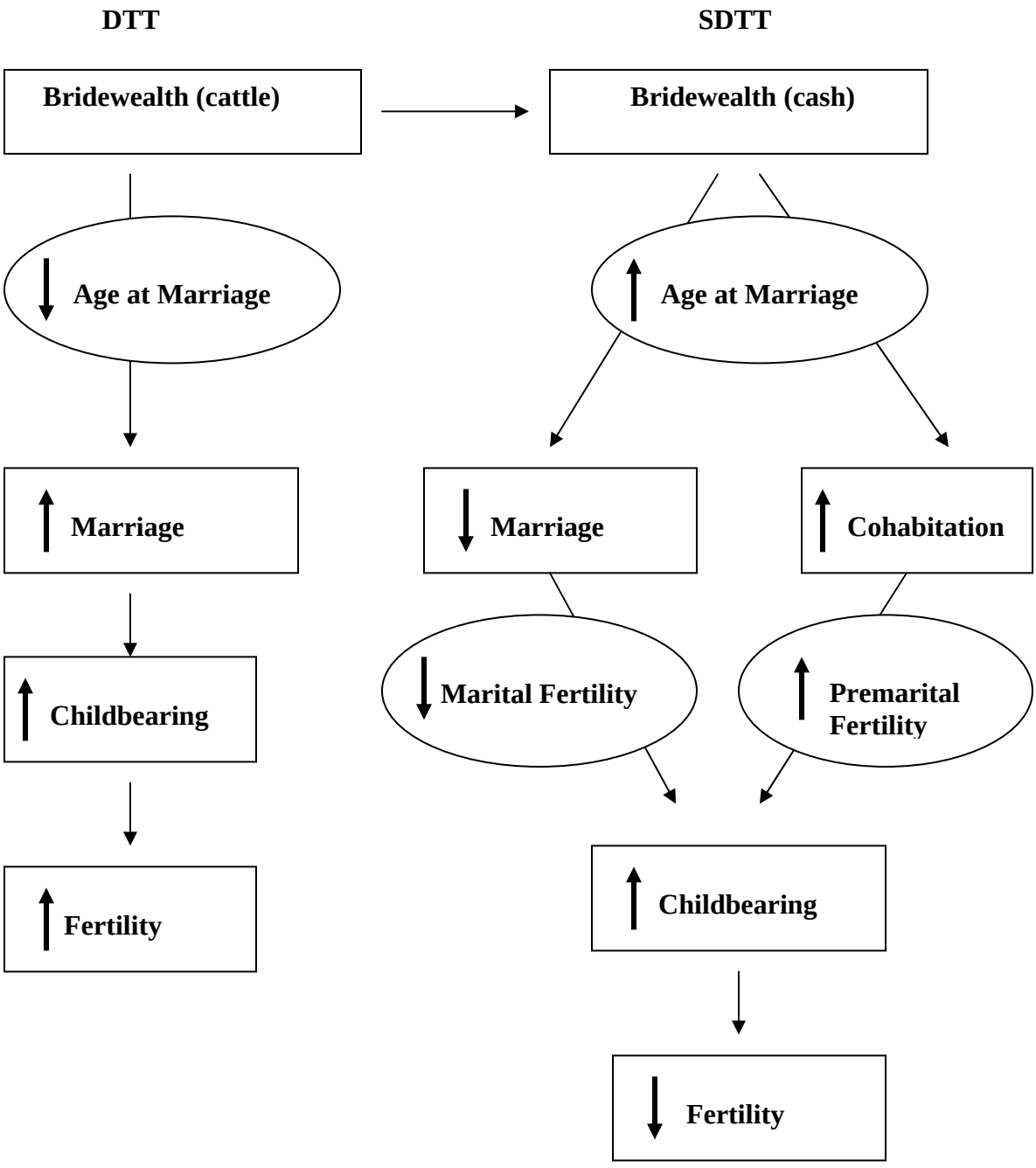
Van de Kaa (2003) further explains these marriage patterns according to the SDTT developed in 1986. He observed that in the SDTT, sex is connected to procreation. The SDTT reveals new developments that bring sustained sub-replacement fertility, a multitude of living arrangements other than marriage (van de Kaa, 2003).

South Africa is found on the rise of higher socio-economic needs. That is, its income growth and educational expansion jointly lead to the articulation of more expressive needs. The shift of bridewealth payment from “cattle” to “cash” has further made marriage processes difficult for many young African men. Bridewealth is sometimes paid in instalments, depending on its affordability. These needs are also centred on self-actualization in formulating goals and women independence in choosing means of delaying marriage. This has led to an increase in the age at which African women marry.

The post-apartheid family planning polices further gave South African women choices to control their fertility (Timaeus and Moultrie, 1993). High use of contraceptives was found among the never-married and the educated women as compared to the married and uneducated women. Even women in the rural areas were forced to make their own decisions about their reproduction while their husbands were in the cities, potentially engaging in extramarital relationships, also channelled into cohabitation (Budlender et al., 2004).

There are socioeconomic factors, such as women’s educational attainment and increasing urbanization, which have impacted towards the lower proportions of marriage and higher fertility outside wedlock. Figure 2.1 looks at the expense of marriage “bridewealth payment” as another factor, in relation to the shift from DTT to the SDTT.

Figure 2.1: Shift from Demographic Transition Theory to the Second Demographic Transition Theory



Basically, figure 2.1 shows the effect of changing marital pattern relative to fertility levels of African women in the country. Furthermore, the increase in childbearing during the SDTT is as a result of the increase in the pre-marital fertility which has been influenced by the increase in the age at marriage of African women. The decrease in the overall fertility during the SDTT can be explained by the ages of women. That is, women in the older cohort are not bearing children like women in the younger cohort because most of the births to the older women are desired and planned (Garenne et al., 2000). Furthermore, second births in South Africa are likely to be delayed (Timaeus and Moultrie, 1993).

In conclusion, the empirical study of the effect of changing marital patterns on fertility levels of African women in South Africa draws on these two theories.

2.3 Definition of marriage in South Africa

The definition of marriage is known to be complex and has been well documented in the anthropological literature (Krige, 1950; Ngubane, 1981). Generally, marriage is a process which involves the payment of bridewealth by the groom to the bride's family. The payment of bridewealth may sometimes be paid in instalments, depending on its affordability, extending the process to over period of months or even years (van de Walle, 1993). This can result in differing perceptions as to when the couple is married based on either when the first payment of bridewealth is made or when the final payment bridewealth is made.

Historically, marriage consisted of formal stages of bridewealth payment. Many characteristics of these marriage practices have been carried into modern society with various adaptations. In most Southern African countries, payment of bridewealth has now shifted from 'cattle payment' to 'cash payment' because of the overall process of modernization (Swartz, 2004).

One can further refer to the payment of bridewealth as the cornerstone of customary "traditional" marriage systems. Customary marriage is a type of marriage governed by systems of indigenous African customary law (Buddlender et al., 2004). Customary marriage has become the most widespread form of marriage that requires rituals such as payment of bridewealth which retains positive and complex meaning to most Africans (Currie, 1994). Contemporary partnerships require both customary marriage, represented by the completion of payment of bridewealth, and religious marriage represented by a church wedding. According to Harrison (2007), people who have not completed both marriage ceremonies are likely to categorize themselves as non-married. Therefore payment of bridewealth remains an important source of status in both rural and urban areas because it stands as a symbol of continuity with African traditions (Mwamwenda and Monyooe, 1997).

In South Africa, most Africans in rural areas follow traditional practices. The largest of these groups are the Zulu, Xhosa, Pedi, Sotho, Tswana, Tsonga and Swazi people (Chambers, 2000). Each of these cultural groups has their own customs and rituals at birth and marriage. In nearly all groups, members of the groom's family enter into negotiations with the bride's parents and agree on the amount for bridewealth. It is called *lobolo* according to Zulu, Xhosa and Swazi people, and *bogadi* according to Tswana, Sotho and Pedi people (Chambers, 2000).

2.4 Marriage Trends and Levels in Southern Africa

Evidence reveals that age at first marriage is rising in Southern African countries, leading to marriage delay (Van de Walle, 1993). The delay has been characterized by female labour participation, women's acquisition of formal education, urbanization and the expense of marriage. Outcome of structural change of the labour market are also likely to influence women's desires and abilities to postpone marriage. Sub-section 2.3.1 and 2.3.2 will discuss marriage rates and cohabitation rates respectively. Finally, the change in never-married women will be discussed in sub-section 2.3.3

2.4.1 Marriage Trends and Levels

Marriage used to be universal and early in Southern Africa in the early 1960's where women married by age 18 (van de Valle, 1968). Furthermore, marriage patterns were characterized by low cohabitation rates and high remarriages, especially among the widowed partners (Lesthaeghe, 1983). Evidence also shows that the average age at first marriage for women is increasing and often exceeds 17 years. However, marriage remains nearly universal in other Southern African countries, except in South Africa and Botswana where marriage by age 18 is uncommon (Sign and Samara, 1996). Table 2.1 shows the percent distribution of women married, aged 15 to 49, in Southern African countries based on data from Demographic and Health Surveys of these countries.

Table 2.1: Percent distribution of women aged 15-49 by marital status, Southern Africa 1988-1998

Country	Year	Married	Never-married	Cohabiting	Widowed	Divorced/ separated	Total
Botswana	1988	35	43	11	3	4	100
Namibia	1992	34	41	16	2	4	100
Zimbabwe	1994	69	18	n/a	5	9	100
Zambia	1996	61	25	n/a	4	10	100
South Africa	1998	31	58	7	2	2	100

Source: Botswana DHS (1988), Zimbabwe DHS (1994), Zambia DHS (1996), Namibia DHS (1992), Buddlender et al, 2004

Zimbabwe reveals the highest percentage of women married in their reproductive ages (69 %), followed by Zambia with 61 percent. Evidence from the DHS reveals the highest percentage of women married throughout their reproductive age groups (Zimbabwe DHS, 1994 and Zambia DHS, 1996). On the other hand, Botswana, Namibia, and South Africa, have the lowest percentage of women married, almost two times lower than the percentage married in Zimbabwe and Zambia. Botswana had 35.1 percent of women

married in 1988 and four years later. Namibia had 34 percent married, almost equivalent to the percentage married of Botswana. In 1998, ten years after the Botswana DHS, the proportion of South African women stood at 31 percent.

The DHS also reveals the percentage of married women throughout women's reproductive age groupings. The percentage of women married in Zimbabwe increases from 62.1 percent in the age group 20 to 24, to 80.2 percent in the age group 35 to 39 (Zimbabwe DHS, 1994). Zambia revealed similar patterns where the percentage married increases from 65.9 percent in the age group 20 to 24, to 79.3 percent in the age group 30 to 34, but decreases slightly to 77.2 percent, 73.7 percent and 74.3 percent in the age group 35 to 39, 40 to 44 and 45 to 49 respectively (Zambia DHS, 1996). Although, there has been a decrease in the percentage of women married in Zimbabwe and Zambia, the percentages are still among the highest, as compared to the proportion married in Botswana, Namibia, and South Africa.

Botswana, Namibia, and South Africa are characterized by a lower percent of married women throughout reproductive age groups. The percentage of married women in Botswana increases from 3 percent in the age group 15 to 19, to 15 percent in the age group 20 to 24, and then 54.6 percent in the age group 45 to 49 (Botswana DHS, 1988). In Namibia, the percentage married increases from 2.9 percent in the age group 15 to 19, to 14.3 percent in the age group 20 to 24, and then 54.3 percent in the age group 40 to 44 (Namibia DHS, 1992). In South Africa, the percent married increases from 1.3 percent in the age group 15 to 19, to 7.1 percent in the age group 20 to 24, and then 24.3 percent in the age group 35 to 39 (SADHS, 1998). The percentage of women married further decreases to 17.8 percent and 13.6 percent in the age group 45 to 49 (SADHS, 1998). The percent married in the age group 15 to 19, shows that marriage during the teenage years, specifically marriage by age 18, and is relatively uncommon (Singh and Samara, 1996). Marriage is indeed delayed in Botswana, Namibia, and South Africa, but in Zimbabwe and Zambia marriage by age 18 is common.

South Africa further presents as a unique case due to different perceptions regarding what constitutes a marriage, as well as the perceived desirability of being married (Budlender et al, 2004). Men are likely to report themselves separated or even divorced, while women report themselves as married, especially in situations where couples are physically separated. Furthermore, bridewealth custom is often spread over an extended period and can lead to complications based on when the payment is made. As a result, the two parties in a marriage may report the event differently (Budlender et al., 2004). Table 2.2 shows how the percent of women married have changed over time in South Africa.

Table 2.2: Percent distribution of women aged 15-49 by marital status, South Africa 1995-1999

Year	Married	Never-married	Cohabiting	Widowed	Divorced/ separated	Total
1995	35	58	4	1	2	100
1996	34	58	4	2	2	100
1997	32	59	5	1	2	100
1998	31	58	7	2	2	100
1999	30	60	6	1	3	100

Source: Buddlender et al., 2004

Table 2.2 presents percentage distribution of women aged 15 to 49 by marital status in South Africa. This used a series of household surveys conducted between 1995 and 1999. Buddlender and colleagues suggests that between 58 percent and 60 percent of women between the ages 15 and 49 were never married. Only between 30 percent and 35 percent of women were married. Those in cohabiting unions also increased from 4 percent to 7 percent of women aged 15 to 49 (Buddlender et al., 2004). Evidence reveals that marriage percentages in South Africa have been low over time.

Buddlender et al (2004) further explain that the actual number of women who are married is probably lower compared to those reporting to be married. Low percentages of married women in South Africa could also result from the low male-to-female ratio due to the

high mortality rates among males. As a result, women outnumber men, especially at marriageable ages (Letamo, 1993). The impact of this is reflected in the high number of women who have never married. Another reason for the low proportion of women married relates to the higher age at first marriage, which brings important changes in a woman's family situation and her future expectations and opportunities (Singh and Samara, 1996).

2.4.2 Cohabitation

Cohabitation can be viewed as a temporary convenient arrangement that will be left once the constraints to marriage are removed. In response to the 'observed culture' where couples now live together as a married people outside the legal framework' (Molomo 1995, p.40) the first attempt was made to enumerate these relationships in the census conducted in 1991. Cohabitation is a relatively common marital status classification in South Africa that is likely to be reported differently by different individuals. As a result, cohabitation in South Africa is a real problem outside the control of most poor women as it is often referred to as a "middle class choice" in developed countries (Coldblatt, 1999, p.7). Most women with high level of education are likely to cohabit instead of marrying.

Botswana revealed that 10.8 percent of women aged 15 to 49 years are cohabiting compared to other Southern African countries (Botswana DHS, 1988). The percentage further increased to a high 17.4 percent in 1996 (Botswana Family Health Survey, 1999). The percentage cohabiting South African women aged 15 to 49 stood at 7 percent in 1998 (OHS, 1995-1999). In 1992, the percentage of cohabiting Namibian women aged 15 to 49 almost equalled the 1996 percentage of Botswana, with 16 percent (Namibia DHS, 1992). Demographic and Health Surveys of Zimbabwe (1994) and Zambia (1996) do not have data on cohabiting women, as cohabitation is not viewed as a norm.

Evidence from the South Africa October Household Survey shows that the proportion cohabiting is relatively high among Africans and Coloureds, in the age group 30 to 34 years at 11 percent. However, within the same age group, the proportion of women cohabiting for Whites and Indians is just below 4 percent (Makiwane, 2004).

Cohabitation is likely to be influenced by lifestyle choices of individuals where there is greater need for flexibility, individual freedom and independence (Buddlender et al., 2004; Gage-Brandon, 1993; Meekers, 1993, and; Manting, 1994). As a result of gradual increases of consensual unions observed in many African societies, Meekers stated that:

> In traditional bridewealth marriages, husbands have authority; husbands expect their wives to be obedient, and they tend to make claims on their wives' labour and income… Hence, women's desire to gain status through economic independence is often a source of conflict within the union. In an attempt to avoid such conflicts a growing group of women now try to escape male control by steering clear from bridewealth marriages. Rather than contracting a formal marriage, these women prefer unmarried cohabitation or lovers who do not live with them because this allows them to maintain liberty Meekers (1993, p.35).

2.4.3 Changes in never-married

Marriage used to be an important goal for many young women, but economic circumstances result in long delays in achieving this. At the same time, the meaning of marriage and relationships appears to have changed. As a result, there are a large proportion of never married women due to rapidly changing social norms, as young people stay in school longer, marry later, and move away from home to seek work, often in urban areas (Mensch, Bruce and Greene, 1998).

Kaufman et al (2001) noted that marriage patterns may be changing because of opportunities such as education and employment that emerge for young women. However, marriage is no longer considered a goal, especially among urbanized women because of the economic cost levied through the payment of bridewealth. The commercialization of bridewealth has created a dilemma for many couples, with some deciding not to marry, as they cannot afford the cost (Makiwane, 2004). As a result, the commercialization of this tradition is one of the key reasons for high proportions of never-married women in South Africa.

Certain advantages may also increase the risk of women never-married, especially in the context of South Africa's severe HIV epidemic. The results of the ecological data, from 33 sub-Saharan African countries, revealed a strong relationship between HIV prevalence and the mean age at first marriage as well as between the HIV prevalence and the interval between first sex and first marriage. Bongaarts (2006) found that the risk of HIV infection, per year of exposure among sexually active women, is higher before marriage than after first marriage. As a result, Quisumbing and Hallman (2003) concluded that apart from the ongoing process of modernity and change, HIV/AIDS itself may affect the marital structures through the increased mortality and consequent lessened availability of partners.

Therefore, the longer marriage is delayed, the longer the period of premarital sex, the period during which partner changes are relatively common, facilitating the spread of HIV. Southern African countries are a good example for showing the relationship between marriage and the HIV epidemic. The age at first marriage has a much wider range, from 16.3 years in Niger to 28.9 years in Namibia (Auvert et al., 2001). The highest median ages at first marriage were found in Botswana (25.7), Swaziland (25.8), South Africa (26.7) and Namibia (28.9). These four countries also reveal some of the highest HIV epidemic rates in the world (Bongaarts, 2006).

2.5 Differentials in Proportions Married in South Africa

2.5.1 Racial differentials

According to Harrison (2007), levels of marriage have fallen among all racial groups since the 1950's. This "flight of marriage" tends to be most pronounced among the African population. Budlender and her colleagues, with the use of the October Household Survey, observed that, between 1995 and 1999, marriage was almost universal among whites and Indians aged 50 and above. However, the percentage of ever-married women aged 50 and above for Africans (80.4 %) and Coloureds (82.8 %) suggests that marriage

was far from universal among these two groups compared to 91.9 percent and 95.3 percent for Indians and whites respectively (Budlender et al., 2004). As a result, Africans were still less likely to get married than whites and Indians because of significant differences concerning the practices of marriage between these population groups.

Makiwane (2004) further showed marriage differences by age group between population groups where 37 percent of Africans in the age group 30 to 34 reported being married which increased to 51 percent in age group 35 to 39. For other population groups, at the same respective ages, coloureds constituted 51 percent and 60 percent respectively, 72 percent and 86 percent for Indians and 82 percent and 83 percent for Whites. These figures do not only indicate relatively low marriage rates for Africans and coloureds, but also show a considerable percentage of marriages happen towards the end of the reproductive period.

As mentioned earlier, the payment of bridewealth is widely practiced among Africans and its shift from 'cattle-payment' to 'cash-payment' has further made it difficult for young African men to marry due to the rapid rise of unemployment in South Africa (Wilson, 1987). While this is the case, it has also been found that marriage is delayed, especially among African women between the ages of 25 to 34 (Swartz, 2004). These are the highly economically active and independent age groups with highly educated women who are affected by the shortage of marriageable men (Wilson, 1987). Such dynamics tend to affect African women more than White and Indian women.

2.5.2 Urban-rural differentials

The urban-rural differences in marriage are explained, not by place of residence per se, but, by differences in labour force participation, sex ratio and marital status resulting from migration and educational attainment of the populations living in urban and rural areas (Smith, 1983). There are reasons why place of residence might exert an independent effect on marriage timing. These explanations include urban women's greater exposure to modern values that favour marriage postponement and their lifestyles that reserve them from the community (Singh and Samara, 1996).

It is also apparent that traditional marriages are a rarer phenomenon in urban areas than in rural areas, accounting for less than 20 percent of all marriages (Budlender et al., 2004). The census and the October Household Survey data show that traditional marriages are generally more common among the rural dwellers, whereas civil marriages are common among the urban dwellers. This can further be explained by the predominance of African people in rural areas to an even greater extent than in urban areas. However, the predominance of African people in rural areas does not explain all of the differences between urban and rural marriage patterns. The 1996 census reveals that 30.7 percent of African married people in urban areas were married by traditional rites, as compared to 58.4 percent in rural areas.

In Southern African countries, the situation is different for urban-rural difference because each of the above attributes is anticipated to the higher likelihood that women in rural areas will marry at a young age. As expected, urban women are less likely than rural women to marry in their teenage years. Table 2.3 show the percentages of women aged 20 to 24 in urban and rural areas who had married by the age of 20.

Table 2.3: Percentage of women aged 20-24 who are married before age 20, Southern Africa

Country	Place of Residence	
	Urban	Rural
Southern Africa		
Botswana	22	17
Namibia	17	22
Zambia	53	75
Zimbabwe	46	58

Source: Westoff et al., 1994

Urban-rural differences are small in Southern African countries, except in Zimbabwe and Zambia, with urban women being as likely as rural women to marry before age 20. In table 2.3, over fifty percent (53 %) of Zambian urban women and 46 percent of

Zimbabwean urban women are likely to marry before age 20 although 75 percent and 58 percent rural women marry before age 20, respectively. Botswana has the smallest percentages of urban-rural differences, with 22 percent of urban woman and 17 percent of rural women who marry before age 20, compared to 53 percent of urban women and 75 percent of rural women in Zambia.

It has also been observed that, the small urban-rural differences in Southern African countries is because most of these countries constitute less than 40 percent of the population living in urban areas. In Namibia, Zambia, and Zimbabwe, the proportion of the population living in urban areas is 33 percent, 35 percent, and 36 percent respectively (Population Reference Bureau, 2007). Botswana and South Africa are clustered more tightly around the regression line at urbanization level with over fifty percent of the population living in urban areas, with 54 percent and 53 percent respectively (Population Reference Bureau, 2007).

As a result, among the countries with less than 40 percent of the population living in urban areas, the proportion of women marrying before age 20 ranges from 14 percent in South Africa (Clark, 2004), 19 percent in Botswana (characterized by late age at marriage as mentioned earlier) to 64 percent in Zambia (Singh and Samara, 1996). Despite the association between the prevalence of early marriage and urbanization, there are many factors other than urbanization that determine levels of early marriage. Factors such as urban living conditions may influence the relationship between women's educational attainment and age at marriage (Singh and Samara, 1996). In urban areas, educated women experience less familial pressure to marry early compared to their educated peers in rural areas. This may be due to urban women having greater access to effective contraceptive methods compared to rural women which enables them to avoid premarital pregnancies which may eventually lead to early marriage.

2.6 Interrelationship between Marriage and Fertility in South Africa

Marriage is a proximate determinant of women's reproductive behaviour. Therefore, it is believed to achieve lower fertility goals through access to and autonomy in using birth control information and services. Most analysis that uses this variable as an intermediate variable to study fertility is concerned with the question of differentials in the timing of marriage. However, Jejeebhoy (1995) argues that the delayed marriage associated with women's education has an unintended impact on fertility.

2.6.1 Fertility Trends in South Africa

South African fertility has been in decline for almost 30 years and is currently the lowest among sub-Saharan Africa. Moultrie and Timaeus (2002) used the age distributions from the 1970 and 1996 censuses to estimate the South African fertility trends from 1955 to 1996. Their observation showed that the fertility transition of South Africa began in the mid-1960. However, between 1950 and 1970, fertility of South Africa was high and stable with the estimated average of 6 to 7 children per woman. The pace of decline has accelerated since the early 1908's with average estimates of 4 to 5 children per woman between 1980 and 1995 (United Nations, 1995). Currently, the total fertility rate of South Africa is at 2.9 children per woman (SADHS, 1999).

The decline occurred at a much faster level for whites and Indians compared to Africans and coloureds. From the end of nineteenth century, whites experienced a long and sustained fertility decline until reaching below-replacement level of 1.9 children per woman by 1989 (Chimere-Dan, 1993). Fertility of Indians declined steadily, from a TFR of 6 children per woman in the 1950's to 2.7 children per woman in the late 1980's. Coloureds also experienced a decline in fertility, from a TFR of 6.5 children per woman in the late 1960's to 3 children per woman by the late 1980's. African fertility is estimated to have decreased from a high of 6.8 children per woman to 3.9 children per woman between the mid-1950's and the early 1990's (Swartz, 2004). Even though, there has been a remarkable fertility decline within population groups, Africans fertility is still among the highest compared to other population groups.

2.6.2 Marriage as Proximate Determinant of Fertility

There are direct and indirect determinants that influence the level of fertility of any given population. There are seven types of proximate determinants of fertility, but this section will only discuss the proportion of women in the total population who are married, the effective contraceptive use, and the impact of age at marriage. Freedman (1986, p.773) noted that proximate variables determines fertility. These proximate determinants are of interest because of their direct impact on fertility. These consist of behavioural factors through which social, economic, and demographic conditions can affect fertility (Palamuleni et al., 2007).

2.6.2.1 Marriage

Marriage is one of the important determinants of fertility (Bongaarts, 1978). In most societies, marriage does not only indicate the onset of a woman's exposure to the risk of childbearing, but also determines the length and pace of reproductive activity (Palamuleni et al., 2007). Marriage is often early and universal in societies where virginity is considered to be essential for the first marriage and where premarital fertility is viewed as a social embarrassment. Most girls who became pregnant before marriage, in such societies, are often required to confess in order for the responsible man to marry them (Denis, 2006). Early marriage may also lead to higher fertility, especially in the absence of contraception. Therefore, marriage at later ages offer women on average a shorter exposure to the chance of becoming pregnant, hence late age at childbearing and lower fertility for the society (Palamuleni et al., 2007).

This is not the case with South Africa because childbearing begins early, even though marriage takes place at later ages. The computations done by Chimere-Dan in 1997 found that 21 percent of women aged 20 to 24 were never-married but, they had at least one child (Mturi and Moerane, 2001, p.266). The importance of marriage in determining the overall level of fertility is consistent with the changes that are taking place with the institution of marriage. This can be further explained by the difference between marital and non-marital fertility of South African women. The TFR for never married women

were observed to be 3.4 children per woman in 1994, and almost as high for married women (Chimere-Dan, 2001). The analysis of the 1996 census conducted by Udjo (2000) confirmed this finding and indicated that TFR differences between married and non married women are small (the difference is about 27%), particularly for the African population group.

Garenne et al (2000) have elaborated this using the data from a Demographic Surveillance System (DSS), and found that age specific fertility rates depict a pattern of premarital childbearing that is highest among teenage girls and exceeds marital fertility between ages 20 and 24. Premarital childbearing accounted for almost all births among women in their teens. According to the SADHS of 1998, premarital fertility is among the highest in South Africa where one-sixth of more than 26 000 children are born to African women younger than 20 years (Department of Health, 1998).

The Alan Guttmacher Institute (1995) has noted that marriage at later ages, allow women to prolong their education and delay first births, tending to have smaller families. Henry and Piotrow (1982) observed that age at first marriage is less important in determining fertility than in the past because deliberate contraception on a worldwide basis has now become the most important factor determining family size. Using the 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 et al., 1991) or partly responsible in reducing fertility in certain countries (Locoh and Makdessi, 1996).

2.6.2.2 Contraception

Contraception is an important proximate factor responsible for keeping fertility low. The family planning programmes in South Africa started in the early sixties and its success has shown a massive impact on its population. High and consistent use of contraceptives and knowledge has led to low levels of fertility because of its universality. Between 1988 and 1998, the South African Demographic and Health Survey collected data about

knowledge and use of contraceptive methods and found that 97 percent of all women had heard of at least one modern contraceptive method (Department of Health, 1998).

The use of modern contraception requires good access to family planning services to enable women to achieve their goals of either spacing or curtailing childbearing. However, contraceptive use tends to differ by racial group, level of education, location, and marital status of women. For example, contraceptive prevalence rate (CPR) in South Africa has increased from 55 percent in 1990 to 60 percent in 1994 (Department of Health, 1998). The 1998 South African Demographic and Health Survey further indicated that CPR was the highest among Indian women with 80 percent, followed by whites with 76 percent, then coloureds with 69 percent, and finally African women, with the least CPR, with 59 percent.

Current use of contraception is, according to Palamuleni et al (2007) expressed as the proportion of currently married women who report they are using a method at the time of the survey. A study done by Garenne et al (2000) found that married women tend to have more children than unmarried women of the same age because births to unmarried women were traditionally not accepted in most societies. As a result women began their childbearing after marriage and continue throughout their reproductive years for as long as they are married. Garenne et al (2000, p.47) further found that non-married women use contraceptives more, as compared to the married women.

Chimere-Dan (1996) revealed an increasing trend of contraceptive use among ever-married women and never married women, by age group. He found 43.3 percent of the never-married women in the age group 15 to 19 used contraceptives as compared to 13.6 percent of ever-married women. Contraceptive use for never-married women increases to 65.2 percent in the age group 30 to 34 as compared to 47.2 percent of ever-married women. The high prevalence of contraceptive use among never-married women relates to the increased use of contraceptives after first birth (Garenne et al., 2000).

As the ever-married women and never-married women grow older, contraceptive use declines due to its ability to affect fertility (Garenne et al., 2000). As a result, pregnancies

for older women are mostly desired and planned. Therefore, contraceptive use for older women after childbearing depends on the desired number of children.

In Agincourt, Garenne et al (2000) found no proper count of birth order by marital status because most cases of higher parity (2+) among women below age 20, were clearly among those who were already married. The pattern of fertility rate among married women was also found to be influenced by a cohort effect of older women. Older women maintain fertility behaviour closer to natural fertility compared to younger cohorts.

High use of contraceptives in the age group 25 to 29 and 30 to 34 is driven by factors found to be influencing marriage patterns, such as, female labour force participation, women's acquisition of formal education, and urbanization. For example, employment may provide economic resources to delay marriage and an economic incentive for parents to encourage their daughters to remain single during this economically productive period of young adulthood (Mason, 1993).

Rural-urban migration among males in the same age groups has affected lower marriage rates among Africans because women, whose husbands migrated to urban mining areas, are forced to make their own decisions about family maintenance and reproduction. Such circumstances force them to limit childbearing and practice family planning without their husbands or partners approval.

2.6.3 Impact of Age at Marriage on Childbearing

Age at first marriage is defined as the age at which the respondent started living with her husband. This age is an important function of women's reproductive behaviour, particularly for their reproductive health. Between one-half to three-quarters of all first births occur within two years of marriage entry in many developing countries (Westoff et al., 1994). Early marriage typically concurs with childbearing at a younger age and can further pose great health risks which are generally exacerbated by poverty and inadequate access to maternal and child health services. In addition, these women are likely to find motherhood the sole focus of their lives, at the expense of formal education, training for

employment, work experience, and personal growth. Early age at first marriage is associated with a high probability of divorce, which may jeopardize their marriage.

In South Africa, the median age at first marriage is around 25 years, according to the October Household Survey of 1997 and 1998 (Budlender et al., 2004). The median age at marriage of two of South African neighbouring countries were also around 24 to 25 years, specifically, 23.9 years for Botswana in 1988 and 24.8 years for Namibia in 1992 (AGI, 1995). As a result, South Africa, Botswana, and Namibia were some of the few developing countries where marriage by age 18 is relatively uncommon, but the proportion of women experiencing early childbearing is high. While the trend towards later marriage is clear for the continent as a whole, there are some countries, such as Lesotho and Mozambique, where the trend has been in the other direction due to cases of stress from conflict or HIV/AIDS, which seems to be contributing to early marriage (UNICEF, 2001)**.**

In 1996, the mean age at childbearing for South Africa was around 28.3 years. This is low compared to 29.6 years for Botswana and 30.3 years for Namibia in 1986 (World Fertility Report, 2003). Although marriage is delayed, motherhood commences early. As a result, there is a rise in teenage pregnancy in South Africa. Of about one-sixth of more than 26 000 children born to African women, were found, in the 1998 South African Demographic and Health Survey (SADHS), to be among women under aged 20 at the time of birth (Department of Health, 1998).

Furthermore, women belonging to the same birth cohort tend to share many cultural and social experiences. As a result, marital duration classifies women in the same way as age when there is less marital disruption and little premarital sexual activity. Childbearing is not confined to marriage, since births occur both before and outside wedlock in South Africa (Pullum, 1978).

Increasingly, research in developed countries shows that high premarital fertility rates are among younger women in their teens, among women with lower educational attainment, and also among subgroups with lower socioeconomic status (Alexander & Guyer, 1993; Willlis & Hagga, 1996; Wu & Martin, 2002). The prevalence of premarital fertility ranges from very low levels of 0.6 percent in Ethiopia, to 58 percent in South Africa. The average prevalence in Sub-Saharan Africa is 16 percent (Garenne and Zwang, 2003). Evidently, South Africa has rates among the highest in the world.

2.6.4 Cohabitation and Fertility

The argument that South African fertility rely less on marriage than most other African countries have been confirmed in a study conducted by Udjo (2001) on marital patterns and fertility in South Africa. He used the 1996 Census to examine factors affecting non-marital fertility and concluded that differences between marital TFR and total TFR are inflated by high rates of childbearing in cohabiting unions. When cohabitation was taken into account, the difference between marital and non-marital fertility was reduced from 29 percent to 9 percent, indicating that most of the non marital childbearing occurs within cohabiting unions. In addition to this, Steyn and Rip (1969) showed that cohabiting relationships among Africans mainly consist of individuals that have commenced marriage negotiation processes.

In sub-Saharan African societies, cohabitation is viewed as the last and temporary phase before marriage (Manting, 1994; Carmichael, 1995, and; Smock, 2000). This view implies that cohabitation is a transitional stage that can either be terminated or transformed into a legal marriage (Prinz, 1995, p. 77). This situation is mainly because cohabiting couples have the opportunity to get to know each other in daily life situations or to test their compatibility. As Meekers (1991, p.2) noted, men from sub-Saharan societies usually postpone a formal marriage until they have proof of their prospective wives' fertility. Therefore, cohabitation can be "considered a trial marriage during which pregnancy becomes a means of testing the relationship". If the trial is experienced as successful, they marry; if not, they break up (Meekers, 1991, p.2).

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 delayed (Burch, 1983). This is commonly experienced by white women and some of the African women with 547 divorces associated with 2 children for whites as compared to 695 African divorces (Statistics South Africa, 2006).

2.7 Conclusion

Marriage is an important determinant of a woman's reproductive behaviour. In African countries, early marriage is characterized by high fertility when most of the births are likely to occur within the first two years of marriage (Swartz, 2004). South Africa is found to reveal a unique case where late marriage among women occurs with a significant number remaining unmarried throughout their reproductive life. Delayed age at marriage is found to be characterized by high levels of education and urbanization. The research methodology used to examine the effect of changing marriage patterns on fertility among Black South African women is discussed in the following chapter (Chapter 3).

CHAPTER 3

Research Methodology

3.1 Introduction

The study set out to answer the following research questions:

1. How have marriage trends and other forms of unions changed over-time?

2. What is the relationship between marriage and fertility among African women in South Africa?

Given the study's objective to examine the effect of changing marriage patterns on fertility among Black South African women, quantitative data obtained from the South African Demographic and Health Survey of 1998 was utilised. This is a nationally representative household survey with the intention to gathering information from women in their reproductive ages. The data collected, provides enough insight into the marital patterns of women and the timing of their fertility. The survey is a representative sample of 11 735 women between ages 15 and 49. A total of 8993 sampled African women were chosen for this analysis to understand childbearing trends in relation to marriage.

Until recently, South African demography was disadvantaged by inadequate data relating to the African population. Although, evidence has shown that South African fertility has declined, African fertility is still higher than the national fertility rate (Moultrie and Timaeus, 2003).

3.2 Data Source

1998 South Africa Demographic and Health Survey (SADHS)

The second SADHS was conducted by the Medical Research Council on behalf of the National Department of Health (DoH) in 1998, with technical assistance from Macro International. The aim of the DHS was to collect detailed data on demographic and health indicators in order to assist policy making in the South African health sector (Department of Health, 2002a). The SADHS employed a two-stage sample using the 1996 Census Enumeration Areas as a sampling frame with sample numbers of households derived in proportion to the number in the 1996 Census because the sample design was not self-weighting at a national level (Department of Health, 2002a). The SADHS objectives provided separate survey estimates for each province and racial groupings. Additional funding was provided by USAID/South Africa to increase the sample size in the Eastern Cape Province, which allowed separate survey results to be produced for each of the five health regions. As a result, these objectives increased the sampling rate for smaller provinces such as the Northern Cape, Free State and Eastern Cape result in the not self-weighting sample design (Department of Health, 1999b). The sample weights were, therefore, used to adjust the responses collected in order to be representative (South African Demographic and Health Survey, 1998).

The South Africa Demographic and Health Survey involved the use of three basic questionnaires, namely, the households, individual, and adult questionnaire. However, the analysis of the study is based on the individual's questionnaire which was directed to all women in the reproductive age group 15 to 49. The questionnaire further asked questions on topics such as background characteristics (age, education, marital status, race, residence, etc), reproductive history, marriage and recent sexual activity, fertility preferences, knowledge and uses of contraceptive methods.

3.3 Method of Analysis

3.3.1 Marriage Trends and Levels

The aim of the study was to examine the effect of changing marriage patterns using the 1998 South Africa DHS. However, to show marriage trends as well as marriage levels of South African women, more than two data sources were used. As a result, other studies were adopted to show the marriage trends and levels over time and are presented in chapter 4.

3.3.2 Measures of Marriage Timing

3.3.2.1 Singulate Mean Age at Marriage (SMAM)

SMAM is often known as one of the most widely used measures of marriage timing (UN, 1990; Smith, 1980; McCarthy, 1982; Xenos & Gultiano, 1992, and; Pebley & Rutenburg, 1986). This measure aimed at examining the historical variations in marriage patterns. In essence, the SMAM measurement compares the age specific of those who are single "never-married" with those who are married. By definition, singulate mean age at marriage is the average number of years lived in the single state by those who marry before age 50 (Hajnal, 1953). The measure further assumes that women, who are not married by age 50, will remain never-married. Therefore, the proportion of women who remain never-married will be measured from an estimation of proportion never-married at age 50 by averaging the proportion never-married for age groups 40 to 44 and 45 to 49.

The mean age at marriage can be estimated indirectly by calculating singulate mean age at marriage (SMAM). But there are points that need to be kept in mind when calculating SMAM. The first point is that, singulate mean age at marriage relies heavily on the proportions of people who are reported as never-married "single" in the survey. However, in the case of South Africa, this creates a problem due to the ambiguity of those who report themselves as living together. To circumvent this problem, women who reported

themselves as living together were treated as “single”. Secondly, SMAM is also found to be sensitive to age reporting errors. This is not a problem in South Africa because data collected in DHS only shows a small extent of exaggeration in the age range used in the calculation of a SMAM. Furthermore, if age at marriage is increasing, the proportion single at younger ages are likely to be higher now than a few years before due to SMAM results being biased towards the more recent past. As a result, SMAM should lie between the two.

The singulate mean age at marriage (SMAM) for the study is computed from the following formula:

$$\text{SMAM} = \frac{\sum_{x=0:49}\left[P_x - \left[{}_{50}P_{45-54}\right]\right]}{\left[1 - P_{45-54}\right]} \qquad (3.1)$$

Where P_x is the proportion single at age x.

${}_{50}P_{45\text{-}54}$, is taken to be proportion ever married in the age group 45 to 49 years and 50 to 54 years. In cases such as the Demographic and Health Survey, women aged 50 years and above are not interviewed. Therefore, proportion ever married by exact aged 50 years is estimated from proportions of never married women in age groups 40 to 44 years and 45 to 49 years (Preston et al, 2001).

3.3.2.2 Mean age at marriage

Mean age at first marriage is defined as the age at which a woman marries or first started living with her husband or partner. The measure is analyzed by five year age groups and other socio-economic characteristics from the Statistical Package for Social Sciences “SPSS”, version 15.

3.3.3 Measures of Fertility

3.3.3.1 Age Specific Fertility Rates (ASFR's) and Total Fertility Rates (TFR's)

ASFR are a set of rates relating to the number of live births to women, in a specific age group, within the reproductive period. The computations of ASFR are calculated from the following formula:

$$\text{ASFR} = \frac{Births_{\ i}}{FP_{\ i}} \qquad (3.2)$$

Where i = five-year age group interval and FP = total female population in a specific age interval.

TFR is a measure of the total number of children a woman entering reproductive age is expected to have in the end of a reproductive period, assuming fertility remains constant in the future, and it is aggregated from the computed ASFR.

3.3.3.2 Age Specific Marital Fertility Rate (ASMFR's) and Total Marital Fertility Rate (TMFR's)

The ASMFR is calculated similarly to the ASFR, but births for the married, never-married, and the cohabiting women are now computed from multiplying the proportion married, never-married, and cohabiting in each age group by births (each age group) in the last year, and are obtained from the data.

The total marital fertility rates (TMFR's) are defined as the number of children a woman would expect to have if continuously married throughout her reproductive life. The TMFR's are also aggregated from the computed age-specific marital fertility rates (ASMFR's).

$$\text{TMFR} = 5 \sum_{15-49} ASMFR \qquad (3.3)$$

3.3.3.3 Timing of first birth

Mean age at first birth is defined as the age at which a woman becomes a mother for the first time. The measure is analyzed by a five-year age group and other socio-economic characteristics from Statistical Package for Social Sciences “SPSS”, version 15.

3.3.4 Measures of Association between Marriage and Fertility

The statistical analyses for the association between marriage and fertility were carried out using a Statistical Package for Social Science (SPSS) version 15. The primary objective is to compare how, age at giving first birth differs for the married, never-married, and the cohabiting women. However, not all women in their reproductive ages experience the event “giving first birth”. As a result, women who have not given experienced their first birth by the end of their reproductive age, will be analyzed by the most popular semi-parametric regression model known as proportional hazard (Cox, 1972).

Kaplan-Meier Survivorship Function

This is a nonparametric method that is good for comparing the effects of changing marriage patterns on having a first birth. The Kaplan-Meier survivorship function estimates the probability of having a first birth during age intervals from 15 to 49. The probability of giving a first birth depends on the age of the woman. There are two functions used to describe the distribution of age at first birth of women in the data, namely, the survival function and the hazard function. These two functions play an important role in the time-to-event variable “age at first birth” and they are further explored below.

i. Survival Function

The survival function s (t) is used to describe lifetimes of women as it attempts to answer specific questions. For example, what is the probability that married, never-married, or cohabiting woman will survive past a certain age without experiencing the event 'having a first birth'? Of those who survive, at what rate will they experience the event? Can multiple causes of experiencing the event be taken into account? The survivor function is computed from the following formula:

$$S(t) = e^{-\frac{t}{\mu}} \qquad (3.4)$$

ii. Hazard Function

The hazard function h(t) describes the life course transition in terms of the underlying hazard rates which are defined as instantaneous probabilities of experiencing the event. Hazard function is used to analyze the effect of changing marriage patterns on having a first birth. The only way to analyze these effects requires marriage patterns being divided into marital groups in order to allow for comparisons of each group.

The hazard function is therefore defined as the probability that either a married, never-married, or cohabiting woman experience the event of giving birth in a small time interval, given that the woman has survived up to the beginning of this interval. As a result, hazard function is known as the time-specific failure rate because the probability of having a first birth in the interval from age 15 to age 49 is dependent on the woman's age. The hazard function is a measure of a woman's likelihood to experience the event of giving birth as the function of her age.

The probabilities of experiencing an event in the hazard function are likely to increase, decrease, or remain constant. The hazard function for births in humans has a U-shape or J-shape because, as expected, the probability of having a first birth is higher at the early ages or 'teenage years' of the reproductive interval. It then declines due to the effect of contraception and becomes constant before beginning to rise again when a woman marries. The following formula is used to estimate the hazard function:

$$h(t) = \frac{P_t(t)}{1 - F_t(t)} = \frac{P_t(t)}{S_t(t)} \qquad (3.5)$$

Where *P(t)* is the probability density 'probability of failure', *S*(*t)* is the survivor function, and *t* is the survival time. *F(t)* is the distribution function.

3.4 Independent and Dependent Variables for the Study

3.4.1 Dependent Variables

Age at first marriage and Age at first birth

Age at first marriage and age of giving birth to the first child are not only important social consequences for women, but they are also good predictors of the overall fertility level of a woman.

Measures for age at first marriage and first birth were obtained from questions in the DHS. Specific questions asked women about their current marital status, if they have been married or lived with a man, the year and month when they started living with their husbands or partner, the age at which they entered into a union, their current fertility status, if they have ever given birth and the age at which they entered into motherhood. The age at first marriage and first birth determine each other because the age at which a woman marries is most likely to determine overall fertility.

The age at first marriage and first birth are given as single ages in the data. For first marriage, ages range from age 10 to age 46 with almost half the women not having entered into first marriage. First birth ranges from age 12 to age 39 after computing frequencies.

3.4.2 Independent Variables

a. *Marital status*

Marriage is a primary indication of the regular exposure of women to the risk of pregnancy and therefore is important for the understanding of fertility. Populations, in which age at first marriage is low, tend to have early childbearing and high fertility. This is not the case in South Africa. Childbearing begins early even though marriage takes place at later ages. Yet, the importance of marriage in determining the overall level of fertility is consistent with the changes that are taking place with the institution of marriage. Marital status is measured by the proportion of women aged 15 to 49 who are married, never-married, and cohabiting.

b. *Educational Attainment*

Educational attainment commonly works in combination with labour force participation to delay marriage. Both labour force participation and wages for women who are employed, have increased since 1994. As a result women have become less dependent on marriage as a source of financial support for themselves and their children. Social norms around women's roles have led to greater acceptance of cohabitation unions, childlessness, and single parenthood (Axinn & Thornton, 2000; Pagnini & Randfuss, 1993; Thornton & Young-DeMarco, 2001). Education also increases woman's ability to regulate their fertility as it is positively associated with contraceptive knowledge and with greater decision-making power in areas related to contraceptive choice (Singh and Samara, 1996).

Education also influences fertility through the rate of marriage and contraception. Educated women are found to be marrying less and using contraceptives more than uneducated women. This results in educated women having fewer children because of the contraceptive knowledge and decision-making power in the field of contraceptive choice (Cochrane, 1979). The pool of a woman's potential marriage partners is generally narrowed with higher formal education because they often marry men, often as educated as themselves, which further increases the chance of having fewer children.

Therefore, educational attainment is measured by the level (no education, primary, secondary, and tertiary education) of education a woman has, and the number of years a woman spends in school.

c. *Urban-rural differentials*

Urban-rural differentials have a great impact on the age at first marriage and the age at first birth as it is expected that urban women are more likely than rural women to marry during their teens. They are also more likely to have fewer children than rural women because of the greater exposure to modern values that favour marriage postponement.

Therefore, urban-rural differences in marriage for this study are measured, not only by place of residence per se, but also by differences in educational attainment and marital status resulting from migration of the populations living in urban and rural areas.

3.5 Conclusion

The research methodology discussed in this chapter was based on the quantitative data (DHS) which is cross-sectional in nature. Despite the data limitation, this study aims to investigate the interrelationship between marriage and fertility of African women. Chapter 4 presents and discusses the research findings.

CHAPTER 4

Presentation of Results

4.1 Introduction

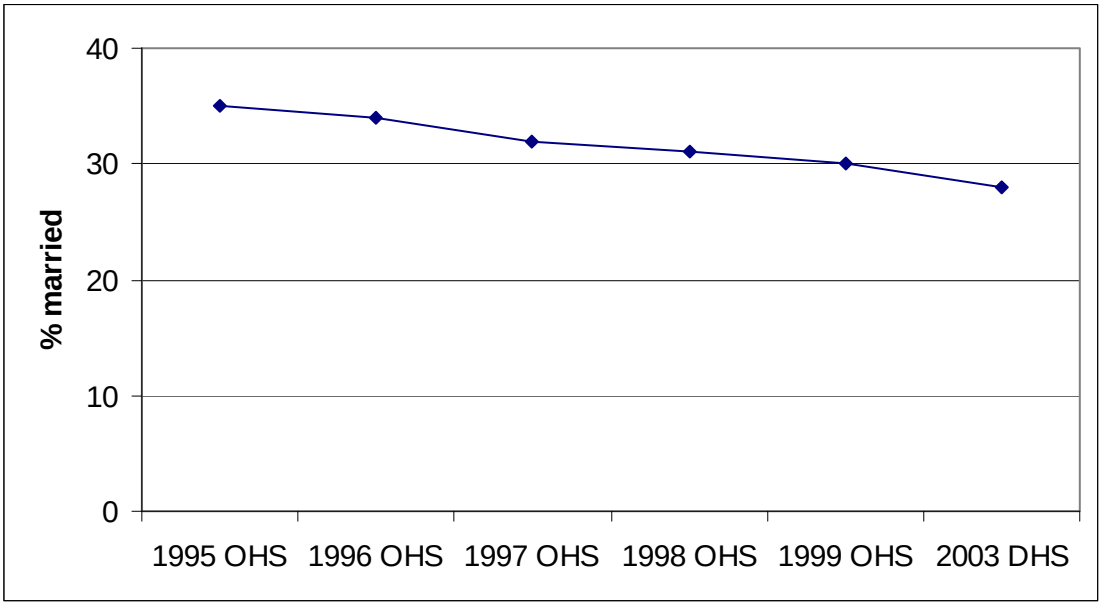
This chapter presents the results of the statistical analysis performed on the quantitative data obtained from the 1998 South African Demographic and Health Survey (SADHS). The population group is an important determinant of marriage and fertility in South Africa. However, differences in socio-economic status make the effect of the population group much less as they are more structural than cultural. This suggests that differences in socio-economic status might be the determining factor. The chapter assesses the socio-economic factors that are hypothesized to have an influence on the proportion of women married, other than factors such as age at marriage, and age at birth.

Using data sources adopted from other studies, section 4.2 discusses the levels and trends in union formation and dissolution of South African women aged 15 to 49. The ages at which a woman first marries, the proportion of all women who ever marry, the proportion of women who remain single, the proportion of women who cohabit and marital disruptions through divorce, are all combined to influence the overall number of children ever born. Hence, section 4.3 discusses the fertility trends by union status. Finally, section 4.4 presents the determinants of fertility life tables of association between marriage and fertility.

4.2 Levels and trends in union formation and dissolution

4.2.1 Trends in marriage rates of South African women

Figure 4.1: Trends in the proportion married of women aged 15-49, South Africa 1995-2003

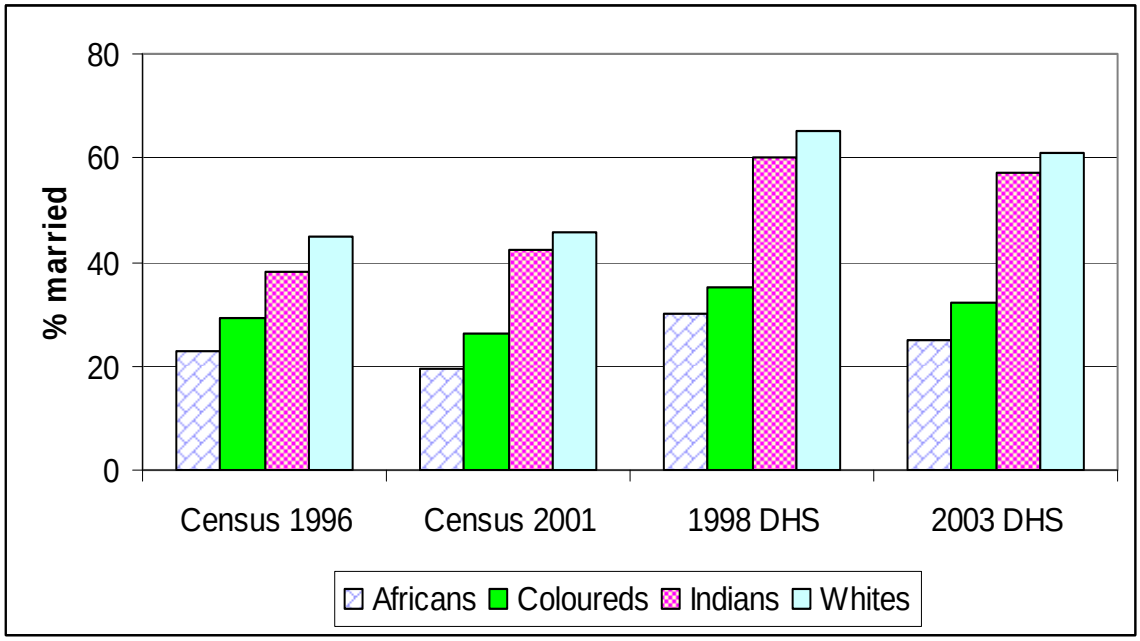


Source: Budlender et al., 2004; SAHDS 2003

Figure 4.1 presents the trends in the marriage rates of South African women aged 15 to 49. The figure suggests a gradual decrease in women reporting themselves to be married from 35 percent in 1995 to 28 percent in 2003. As discussed earlier in the literature, this supports the idea that marriage is not universal in South Africa with the proportion of women married below 50 percent. The reduction in the proportion of women married is reported to be largely driven by non-marriage, rather than widowhood or divorce, despite increasing rates of female morbidity and mortality in reproductive ages due to HIV/AIDS (Dorrington, 2001).

4.2.1.1 Racial Differentials

Figure 4.2: Percentage of women married aged 15-49 by racial group, South Africa 1996-2003



Source: Udjo, 2001; 2003 SADHS

Figure 4.2 indicates the percentages of South African women married aged 15 to 49 by racial group from 1996 to 2003. The figure suggests low percentages of women married over the period among Africans and coloureds, compared to Indian and white women. In 1996, the percentages of women married ranged from 23 and 29 percent for African and coloured women, respectively, to 38 and 45 percent for Indian and white women respectively. The percentages of women married further declined by 3 percent for both African and coloured women, with 20 percent for African women and 26 percent for coloured women in 2001. While for Indian and white women, there have been an increases of 4 percent in for Indian women and almost stable for white women. The results from DHS confirm similar patterns of decrease in the percentages of African and coloured women married over the period 1998 to 2003.

4.2.1.2 Racial differentials by age group

Figure 4.3: Percentage of women married aged 15-49 by racial group, South Africa 1998

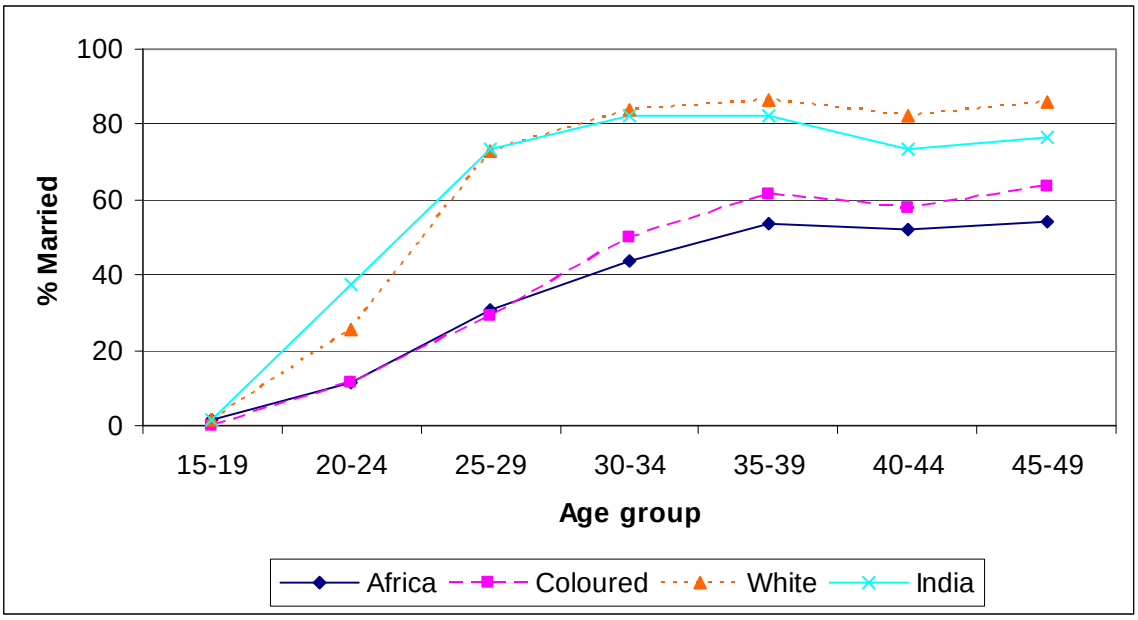
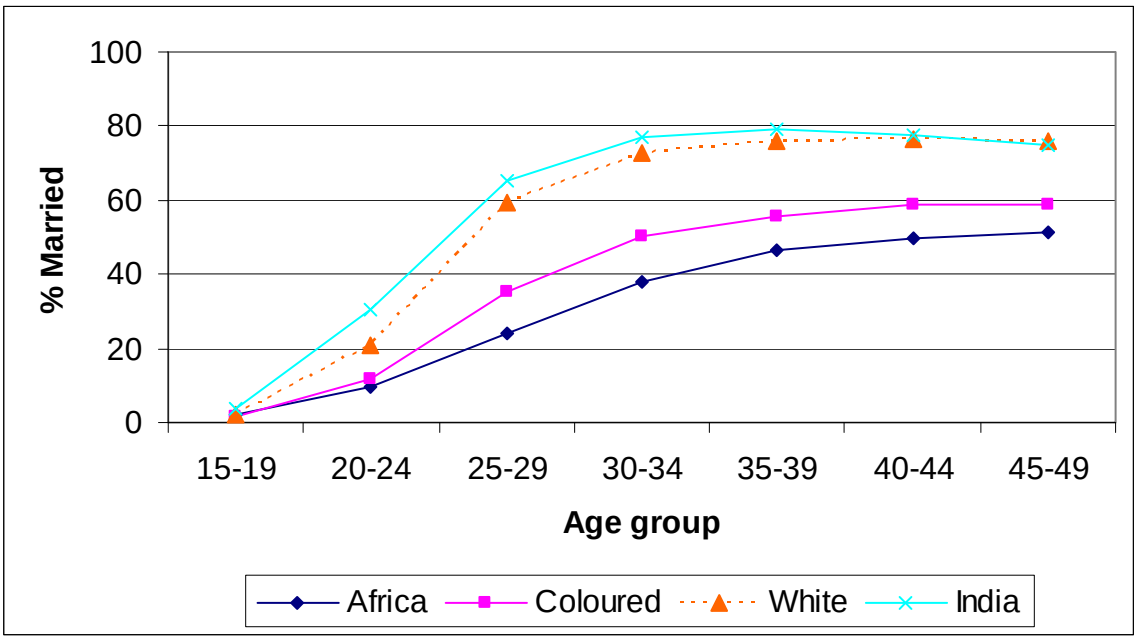


Figure 4.3 present the percentage of South African women married by age group. The figure suggests there is an increase of marriage throughout the reproductive ages. The general conclusion that marriages in Africa are early and universal may not apply in South Africa. Marriage is more universal among Indians and whites. The proportions of married white and Indian women increase sharply between the ages of 15 and 30, reaching highs of about 83 percent before levelling off at around 85 percent. As expected, Africans have the lowest proportions married, followed by coloureds, with the proportion married increasing to about 55 percent between the ages of 20 and 35 before levelling off at around 57 and 60 percent for African and coloured women respectively. This is in the expected direction, as stated in the literature, where marriage is late among African and coloured women, entering into marriage by age 25. However, more coloured women report being married than African women after age 25. Reaching a high of 65 percent in the age group 45 to 49 compared to 55 percent for African women.

Comparing the proportions of married African women with those of women from East and Southern Africa (Lesotho, Namibia, Swaziland, Zambia, and Zimbabwe), African women reveal a similar pattern of proportion married as Namibian and Swaziland women, with proportion married below 50 percent in the age group 30 to 34 compared to over 70 percent in Lesotho, Zambia, and Zimbabwe (Macro International Inc, 2009). The proportion of married women in Lesotho, Zambia, and Zimbabwe are same as non-African women of South Africa (Macro International Inc, 2009).

Figure 4.4: Percentage of women married aged 15-49 by racial group, South Africa 2001



Source: Udjo, 2001

Figure 4.4 shows the results of the percentage of women married, computed by Udjo (2001). Comparing the percentages of women married with those presented in figure 4.3, figure 4.4 shows a decrease in the percentage of women married in each age group, among all racial groups. However, white and Indian women still report the highest percentage married compared to coloured and African women. Focusing on the marriage patterns among the oldest age group (45-49), for 1998 and 2001, about 85 and 75 percent of white and Indian women, respectively, were married in 1998 compared to 75 percent

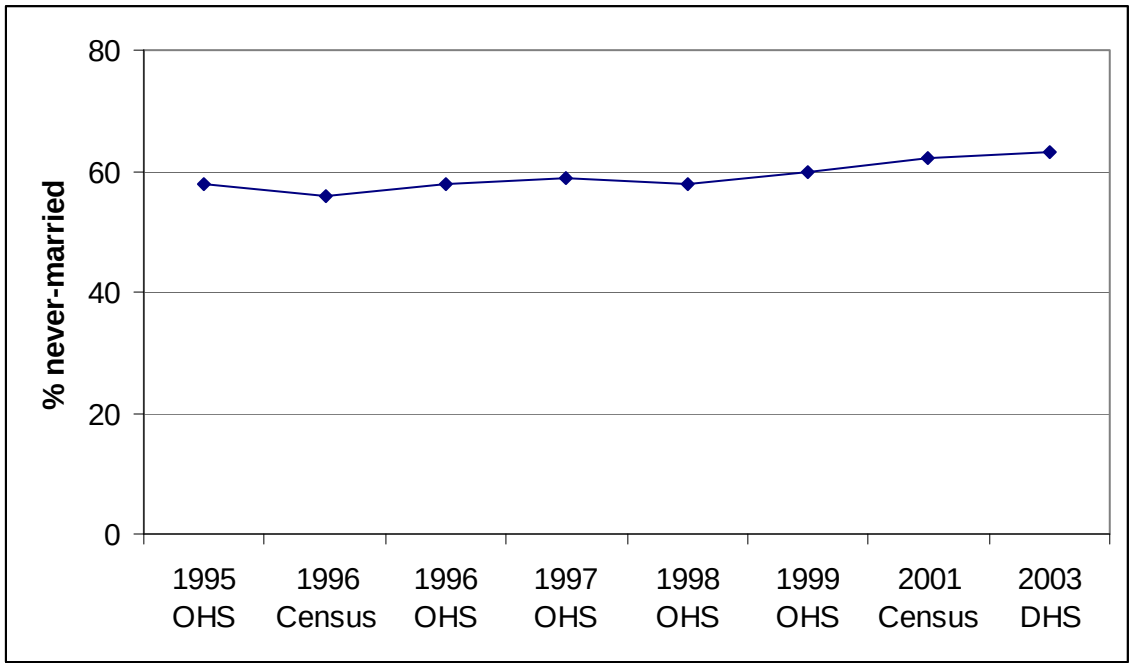
in 2001. The percentage married among Indian women has not changed in the older age group.

African and coloured women, on the other hand, reveal a similar trend of decreasing marriage percentages. The percentages of women reported married in the older age group (45-49) declined by 5 percent for both African and coloured women in the year 2001. Overall, the results from both figure 4.3 and 4.4 suggest that marriage is declining, but still popular among white and Indian women compared to coloured and African women. Moreover, marriage tends to be popular among older age groups among African an Indian women because they enter into marriage union late (see Hosegood et al., 2009).

4.2.2 Trends in never-married

The second demographic transition also suggests that as populations become wealthier and more educated, greater weight is attached to individual self-realization, recognition, and expressive work and education values (Lesthaaghe et al., 1989). An increase in the never-married has been observed in all rich countries of the OECD after 1990, with the exception of Japan (Willis and Haaga, 1996). Furthermore, research in developed countries found that rates of the never-married are higher among younger women in the age cohort of 15 to 19 and 20 to 24, particularly among women with higher educational attainment and higher socioeconomic status (Alexander and Guyer, 1993; Willlis and Hagga, 1996; Wu and Martin, 2002). The same trend is being observed in developing countries, although the pace of increase is reported to have started later. Hence, it is important to know the pattern of the never-married women in South Africa.

Figure 4.5: Trends in the proportion never-married women aged 15-49, South Africa 1995-2003



Source: Udjo, 2001; Budlender et al., 2004

Figure 4.5 present the proportions of the never-married women aged 15 to 49, adopted form other studies. The figure suggests a gradual increase in the proportions of never-married women from 58 percent in 1995 to 62 percent in 2003. This is in the expected direction given marriage is declining. Trends in the proportion of never-married women in South African can also be ascertained by looking at the proportion of women who marry. Figure 4.1 presented earlier, suggests that there has been a continued decline in the proportion of South African women aged 15 to 49 who marry between 1995 and 2003. Furthermore, the increase in the proportion of the never-married women is likely to driven by the declining proportion of women who marry. As mentioned earlier, the reduction in the proportion of women who marry in reproductive ages is driven by non-marriage. Unlike in the pre-apartheid period most marriages occurred in situations where birth preceded marriage, whereas today women have the choice not to marry. Even in cases where birth preceded marriage, the responsible man can only support the child financially instead of marrying the mother (Denis, 2006). This is in the expected direction, as stated in chapter 2, that marriage in South Africa is declining because of the

combination of historical, cultural and economic factors have disrupted the process of marriage thereby making the proportion married larger than the increase in proportion never-married.

4.2.2.1 Racial Differentials

Singulate mean age at Marriage (SMAM)

Figure 4.6: Percentage all women never-married age 15-49 by racial group, South Africa 1998

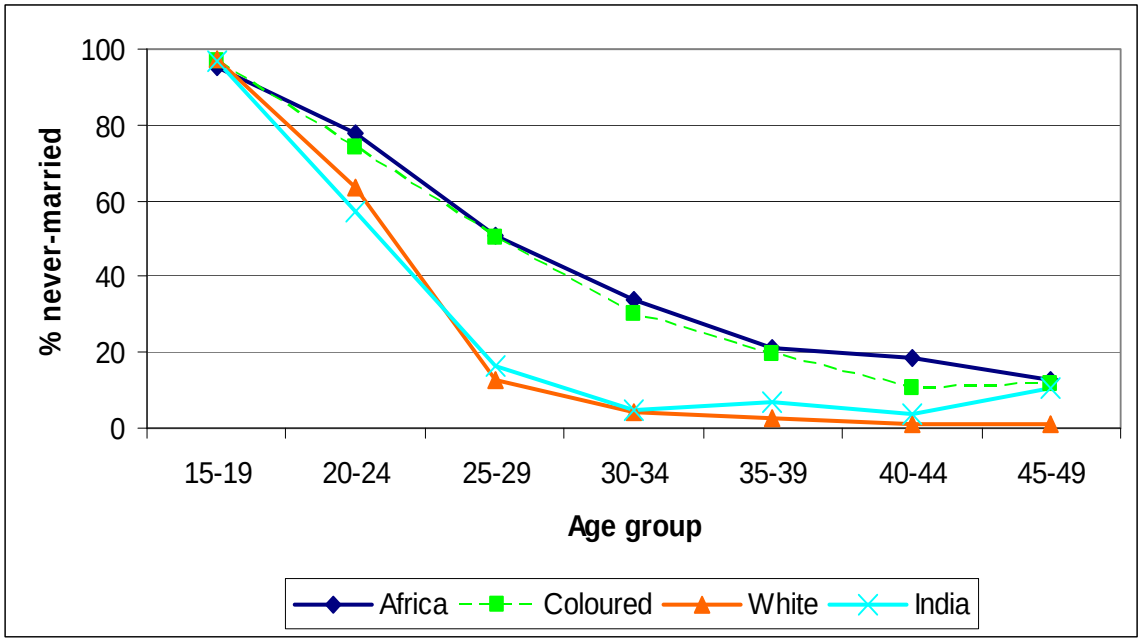


Figure 4.6 presents the percentage of women never-married aged 15 to 49 by racial group. The results were computed from the 1998 SADHS. The highest percentage of women never-married were reported for Africans and coloureds throughout the reproductive ages, while whites and Indians reported the lowest percentage. The highest percentages are reported in the age group 15 to 19 (over 95 percent) where only few or no marriages took place in this age group. Comparing the percentage of never-married African, coloured, white, and Indian women, the highest percentages are also reported at the prime reproductive ages (20-39) for African and coloured women, while low for white and Indian women. The singulate mean age at first marriage computed for women

in 1998 also revealed that African and Coloured women were marrying late (27.1 and 27.2 years respectively) compared to white and Indian women (23.9 and 23.0 years respectively). This is in the expected direction, as stated in the literature, where white and Indian women enter into marriage in their early-twenties, with about 40 percent already married compared to only 20 percent for African and coloured women. Focusing on the never-married patterns among the oldest ages (40-44), about 20 and 15 percent of African and coloured women, respectively, were never-married, while almost all white and Indian women reported being married.

The gap of percentages of never-married women in the age groups 25 to 29 and 30 to 34 can be attributed to African and Coloured women entering into marriage in their mid-twenties (see Udjo, 2001). As also mentioned in chapter 2, marriage among Africans and coloureds is delayed in favour of cohabitation.

Figure 4.7: Percentage of all women never-married aged 15-49 by racial group, South Africa 2003

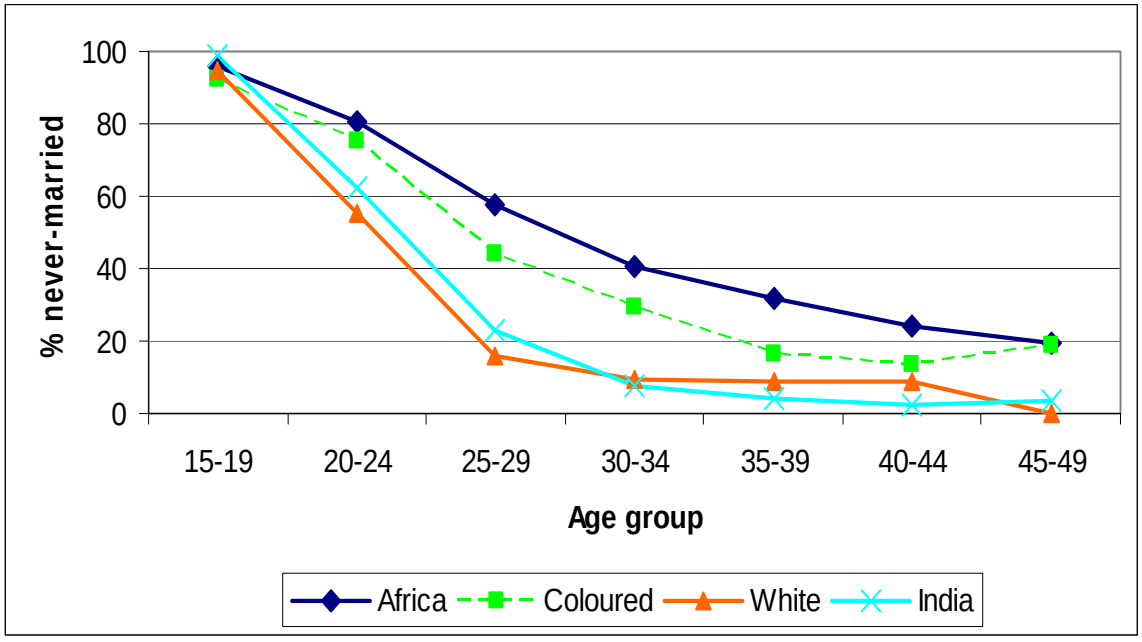
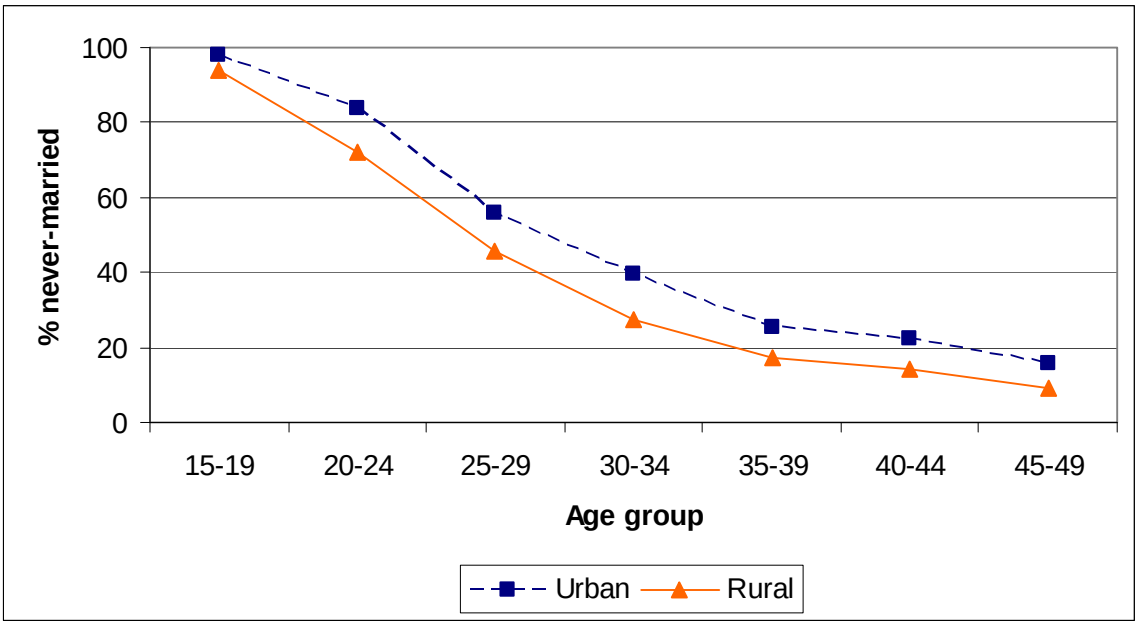


Figure 4.7 presents the percentage of women never-married, aged 15 to 49 by racial group. The results were computed from the 2003 SADHS, in order to observe trends. Highest percentages of never-married women were recorded for African and coloured women. Comparing the proportions of women never-married in 1998, the gap of never-married African and coloured women widens between the age groups of 25 to 29 and 35 to 39 in 2003. The singulate mean age at first marriage computed for women in 2003 revealed an increase in the age at which African women marry (27.9 years) compared to 25.7 and 23.5 years for Coloured and white women. This increase may be due to the often cited bridewealth as common among Africans (van de Walle, 1993). The expense of bridewealth further makes it difficult for Africans to marry because, unlike prior-1998, bridewealth today is associated more with the educational attainment of a woman. Hence, more African women remain never-married. Focusing on the oldest ages (45-49), the percentage never-married doubled in 2003 for African and coloured women, while white and Indian women reveal one hundred percent proportion married in the age cohort 45 to 49. This shows that the percentage of the never-married is increasing.

4.2.2.2 Urban/Rural Differentials

The aim of the study was to examine the effect of changing marriage patterns on fertility among black "African" South African women. The decision to focus on Black women hinged on two basic factors; (1) available evidence shows that changes in marriage patterns are most notable in this racial group; and (2) Black women have the highest fertility level relative to other racial groups. One of the research questions attempts to investigate how socio-economic factors have influenced the effect of changing marriage patterns. Figure 4.8 presents the percentage of African women never-married by place of residence.

Figure 4.8: Percentage of African women never-married aged 15-49 by place of residence, South Africa 1998



Differentials by place of residence reveal that urban African women have the highest never-married percentage throughout the reproductive ages, compared to rural African women. African women residing in rural areas tend to enter into marriage earlier than African women residing in urban areas. The singulate means ages at first marriage computed for these women were found to be 26.3 and 28.1 years for rural and urban African women respectively. Figure 4.8 also shows that over 90 percent of both urban African and rural African women aged 15 to 19 are never-married where only a few or no marriages take place in this age group.

Urban-rural residence is, like educational attainment, a prevailing factor in defining the effect on nuptiality patterns of all other socio-economic factors. The percentage never-married, at the prime reproductive ages (20-39) show that the highest percentages are reported among the urban African women rather than rural African women. This is in the expected direction given that urban women are more likely to be exposed to better education than rural women (Singh and Samara, 1996).

Focusing on the never-married patterns at the oldest ages (45-49); about 10 percent of both urban and rural African women are never-married, leaving a high 85 percent being married. This shows that, although urban African women are delaying marriage, they are as likely as rural African women to be married in their oldest ages.

4.2.3 Trends in cohabitation rates

Figure 4.9: Trends in the proportion of cohabiting women aged 15-49, South Africa 1996-2003

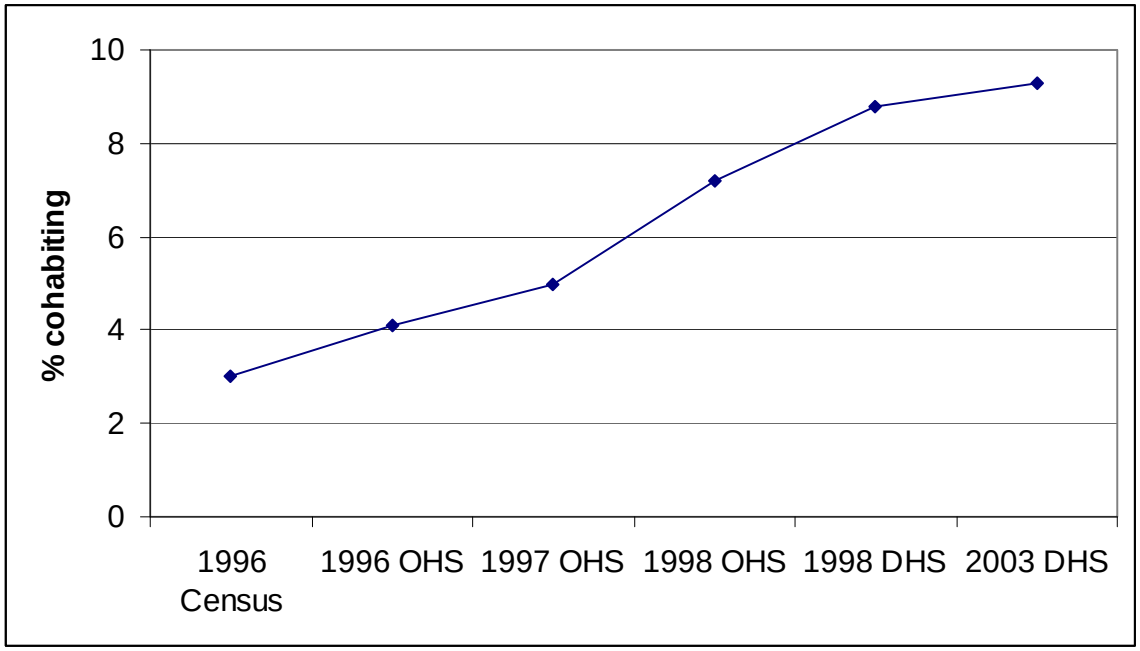


Figure 4.9 presents the trends in the percentage of cohabiting South African women. The figure shows an increase in the percentage of women reporting themselves as cohabiting over the period from 2.9 percent in 1996 to 9.3 percent in 2003. Trends in the proportion of cohabiting women in South Africa can also be ascertained by looking at the proportions of women who marry and never-marry. The increase in the proportion of cohabiting women is largely being driven by low proportions of women marrying and increasing proportions of women never-married. This is in the expected direction where, given the inflated demands placed on contemporary bridewealth, it is difficult for many

unemployed or lowly paid young men to meet the costs associated with getting married (van de Walle, 1993). Such demands are associated with educational attainment of woman. Despite the structural and cultural changes that create constraints to marriage, unemployment emerges as one of the main factors facilitating the increased levels of cohabitation. For this reason, cohabitation can be viewed as the alternative for being married. Furthermore, cohabitation can also be viewed as an alternative for being never-married as it represent an extension for dating.

4.2.3.1 Racial Differentials

Table 4.1: The odds of all women being in a cohabiting union by the chosen variables, South Africa 1998-2003

	1998		**2003**	
	%	Odds	%	Odds
Age group				
20-24	20.6	1.00	19.9	1.00
25-29	24.9	1.45**	21.8	1.37**
30-34	18.2	1.16	20.7	1.49**
35-39	15.5	0.96	15.2	0.96
40-44	13.2	1.07	14.2	1.14
45-49	7.5	0.77	8.1	0.70**
Population group				
African	79.9	1.00	77.4	1.00
Coloured	15.7	1.17	17.4	1.29**
White	3.5	0.51**	3.7	0.89**
Indian	0.8	0.22**	1.5	0.01
Place of residence				
Urban	49.9	1.00	60.9	1.00
Rural	50.1	1.28**	39.1	0.88
Educational attainment				
No education	15.6	1.00	10.7	1.00
Primary	35.8	0.54**	23.2	0.52**
Secondary	45.3	0.29**	66.0	0.35**
Higher	3.3	0.17**	3.2	0.17**

** Statistically significant at $p < 0.05$

Table 4.1 presents the odds of women being in a cohabiting union by age group, population group, place of residence and educational attainment. Looking at age groups in 1998, the odds of women being in a cohabiting union were higher for ages 25 to 29, 30 to 34, and 40 to 44, with 1.45; 1.16; and 1.07, respectively, compared to ages 20 to 24. A similar pattern was observed in 2003 where women aged 25 to 29, 30 to 34, and 40 to 44 had the highest likelihood of being in a cohabiting union compared to women aged 20 to 24. However, the odds of being in a cohabiting union were statistically significant at ages 25 to 29 in 1998, and 25 to 29, 30 to 34, and 45 to 49 in 2003. The highest percentage of women was also found in ages 25 to 29, with 25 percent in 1998 and in ages 25 to 29 and 30 to 34 in 2003. This is in the expected direction, as stated in the literature, where South African women marry late (at age 26.7) (Udjo, 2001). The results presented in figure 4.3 and 4.4 further confirm the literature. The odds of being in a cohabiting union were also observed in older ages, specifically, 40 to 44 for 1998 and 45 to 49 for 2003. This is often cited (Udjo, 2001) where re-marriages are not common in South Africa, especially among Africans and coloureds. Also, the fact that marriage dissolution occurs at older ages results in a higher likelihood of being in a cohabiting union in older ages.

Looking at population groups, the odds of being in a cohabiting union were higher for coloured women and lower for white and Indian women, compared to African women. In 1998, 15.7 percent of coloured women were 1.17 times more likely to be in a cohabiting union compared to African women. On the other hand, white and Indian women were, 0.51 and 0.22 times less likely to be in a cohabiting union, respectively. The odds of white and Indian women cohabiting were statistically significant. In 2003, the odds of being in a cohabiting union increased for both coloured and white women. However, coloured women had the highest odds of being in a cohabiting union, compared to African women, with 1.29 likelihood of being in a cohabiting union. White and Indian women were still less likely to cohabit, with the odds of 0.89 and 0.01 respectively. Budlener et al., (2004) marriage is more stable and popular among whites and Indians, hence, lower odds of cohabiting. The results presented in figure 4.2 confirm these findings. The highest odds of cohabitation for coloured women can be attributed to their

representation of the disadvantaged communities in the country (similar to Africans). They experience high levels of illiteracy poverty and unemployment.

The situation does differ for coloureds. African culture (bridewealth) and structural changes (socio-economic status, lower education and unemployment) imply limited resources to establish legal marriage, thus making cohabitation the next best alternative. For coloureds, this is not the case, even though there are structural changes, bridewealth is not common. Therefore cohabitation can be viewed as an opportunity to know each other in daily life situations or test their compatibility.

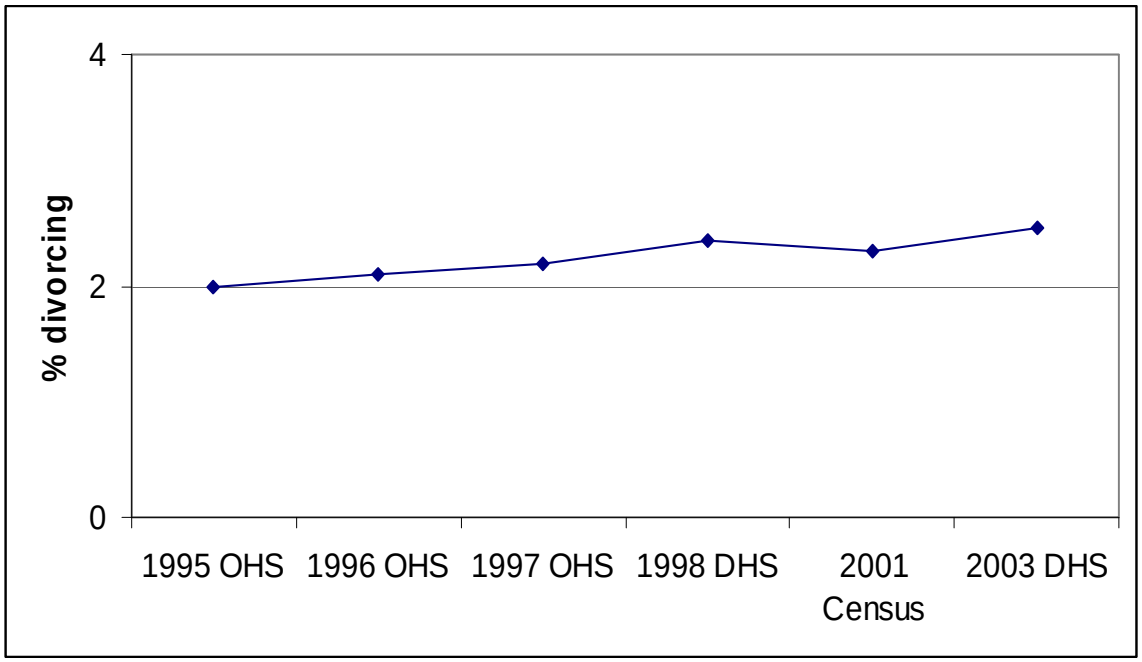
Place of residence on the other hand reveals the highest odds of rural women being in cohabiting union as compared to urban women. In 1998, 50.1 percent of rural women were 1.28 more likely to be in a cohabiting union as compared to urban women. The odds were statistically significant. In 2003, rural women had less likelihood of being in a cohabiting (0.88) as compared to urban women. This is in the expected direction as stated in the literature that rural-urban migration has impacted towards lower marriage rates. The percentages of rural women even confirm the impact of rural-urban migration, with about 10 percent decline within five years. As often sited (Singh and Samara, 1996), female labour participation and attainment of formal education are other factors that expose women to new ideas and norms that discourage early marriage, and in return encourage cohabitation, given the rural-urban migration in the country.

Given that educational attainment is thought to influence women's ability to delay marriage, table 4.1 also looks at the effect of educational attainment for women to cohabit. The odds of being in a cohabiting union in 1998 and 2003 were lower and statistically significant for women with primary, secondary, and higher education as compared to women with no education. The odds of women with primary education and higher education did not change significantly with five years. However, the odds of women with secondary education have increased with 0.06 likelihood of being in a cohabiting union within five years. This is in the expected direction as stated in the literature that formal schooling; especially secondary education has increased in most

developing countries (Singh and Samara, 1996). The results further confirm the above statement as the percentages of women with secondary education have increased from 45 percent in 1998 to 66 percent in 2003. Overall, cohabitation is more likely to be associated with less education and given the high unemployment status in South Africa, this further increase the prevalence of cohabitation, especially among the disadvantaged communities.

4.2.4 Trends in union dissolution

Figure 4.10: Trends in the proportion divorced of women aged 15-49, South African 1995-2003



Source: Budlender et al 2004; Udjo 2001; 2003 DHS

An indication of marital instability and dissolution in any population could be obtained by examining the proportions divorced. Figure 4.10 present the proportion of South African women aged 15-49 who are divorced. The figure suggests a gradual increase in the proportion of women divorcing over the period. Though there is a gradual increase, few women aged 15-49 are reported as divorced with the proportion not rising above 3 percent in each data source. The proportion increased from 2 percent in 1995 to about

2.5 percent in 2003. Hosegood et al (2009) found that under-reporting of divorce is likely to be driven by families whose tradition does not permit divorce.

The low rates of divorce likely reflect the high proportion of women who do not marry or it could also reflect stability in marriage for women who do marry. The results presented in figure 4.1 confirm that marriage is very low in the country and the proportion married have been decreasing over time. Furthermore, the high proportion of marriages contracted through customary rites has impacted to the low divorce rates because prior to 1998, marriages contracted under Customary Marriage Act could be dissolved by a tribal court. However, given the complexity of the marriage process, the marriage dissolution was not often by tribal court (Hosegood et al., 2009). In the expected direction, if re-marriage commonly takes place soon after divorce, this would minimize the magnitude of marital instability and dissolution at any point in time.

4.3 Fertility levels by union status

For the purpose of this section, the Coloured, White, and Indian women are grouped together due to their small sample sizes which could not allow individual analysis. Although this creates biases given that these groups have different demographic socio-economic characteristics, grouping them bring enough insight in understanding the differences between Africans compared to other groups. It has been shown that with regard to marriage and fertility behaviour, Whites and Indians follow a similar pattern of high proportion married and low fertility and Africans have much higher fertility and lower proportion married. Coloured tend to be in between these groups, therefore it is worth noting that grouping these grouping them with Whites and Indians might introduce bias that could underestimate the gap between Africans and non-Africans. The size of the African women is 8993 and for non-African women is 2681.

4.3.1 Average number of children ever born (CEB)

As stated earlier in chapter 3, one of the most important objectives of the Demographic and Health Survey programme was to derive reliable and unbiased estimates of fertility using standardised questionnaires and to analyse the data following established procedures. This section presents the levels of lifetime fertility estimated from the 1998 South Africa DHS. Comparisons for the mean number of children ever born (CEB) are made for race, marital status and type of residence.

The reason for not using the 2003 SADHS relates to the data quality in the 2003 SADHS appearing to find particular expression in the fertility data collected. There was a systematic bias in the reporting of births which made fertility levels unplausible. Overall the 2003 SADHS data imply a collapse in South African fertility, particularly so in non-urban areas (Moultrie and Timaeus, 2003). Therefore, close inspection of the data suggests that fertility data (recent or lifetime levels, differentials or trends) collected in the 2003 SADHS should be read with caution.

4.3.1.1 Average number of children ever born by race

Figure 4.11: Mean number of children ever born to South African women by race, 1998

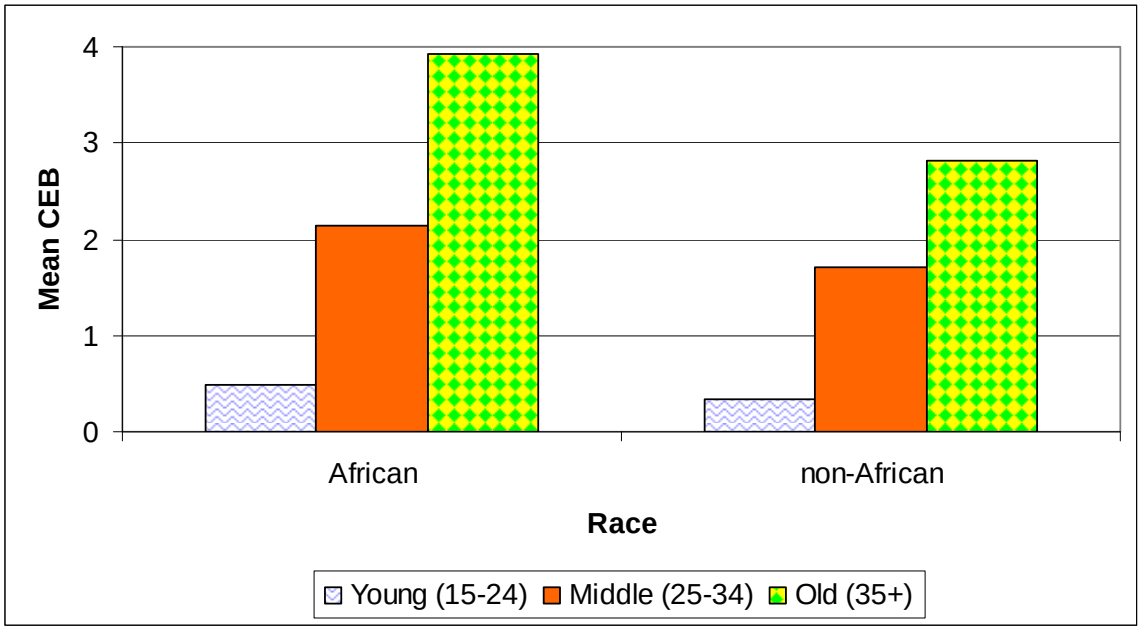
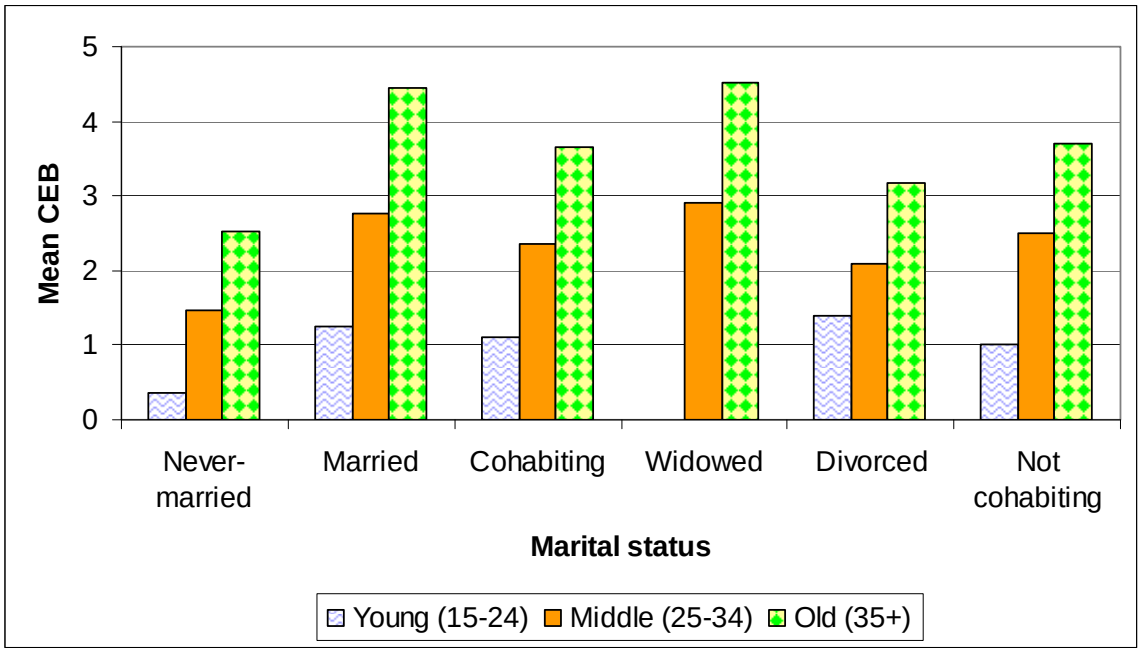


Figure 4.11 presents the mean number of children ever born to South African women by racial group. The mean numbers of children ever born were grouped by the current age of women at the time of the survey, namely, young women (15-24), middle aged women (25-34) and old women (35+). Figure 4.11 shows that the mean number of children ever born are highest for older African and non-African women. This is in the expected direction, as discussed earlier in the literature, that women will continue giving birth as long as they are within the reproductive period. The mean number of children ever born is 3.92 and 2.89 for old African and non-African women, respectively. As expected, African women have the highest mean number of children ever born in all age groups compared to non-African women. This can be explained by the highest premarital childbearing among African women (see Singh and Samara, 1996).

4.3.1.2 Average number of children ever born by marital status

Figure 4.12: Mean number of children ever born to African women by marital status, South Africa 1998



NB: Mean children ever born to young widowed women are omitted because of the small sample size. As expected, widowhood takes place at older ages.

Figure 4.12 presents the mean number of children ever born to African women by marital status. Older women have the highest mean number of children ever born, ranging from 2.5 for the never-married women to 4.6 for the widowed women. This is in the expected direction where these women have been giving birth throughout their reproductive ages. Furthermore, as stated in the literature, most births to older women are planned and desired (Garenne et al., 2000). Never-married women have the lowest mean number of children ever born in all age groups at about 0.5, 1.5, and 2.5 for young, middle, and old women, respectively. This is in the expected direction, as discussed earlier in the literature, where the majority of births among never-married women are first births and they are likely to delay their second birth due to contraceptive use.

As expected, married women have the highest mean number of children ever born as they are likely to continue childbearing for as long as they remain married. It should also be born in mind that some births to married women occur before marriage. Widowed women have the highest mean number of children ever born, with older women reaching a high of 4.5 and middle aged women (25-34) reaching 2.9. The mean number of children ever born to divorced women are among the second highest and can be attributed to births occurring while in marriage and before marriage. Cohabiting women reveal a similar pattern with a mean number of children ever born compared to married women. As mentioned earlier in the literature, cohabiting women are most likely to be educated and utilising contraceptives.

The mean number of children ever born to women not cohabiting is higher than those of cohabiting women and divorced women, with the exception of the youngest women. About 2.4 children per woman not cohabiting aged 25 to 34 and 3.7 children per woman not cohabiting aged 35 and above compared to 2.3 and 3.5 children per woman cohabiting aged 25 to 34 and 35 and above, respectively. The divorced women had 2.1 and 3.2 children for the same age groups, respectively. There are several reasons for this observation. Unlike during the apartheid period, responsible fathers are now given an option to only maintain their children instead of marrying their mothers (in cases where childbearing preceded marriage). This affects the mean number of children ever born to women not cohabiting.

4.3.1.3 Average number of children ever born by type of residence

Figure 4.13: Mean number of children ever born to African women by place of residence, South Africa 1998

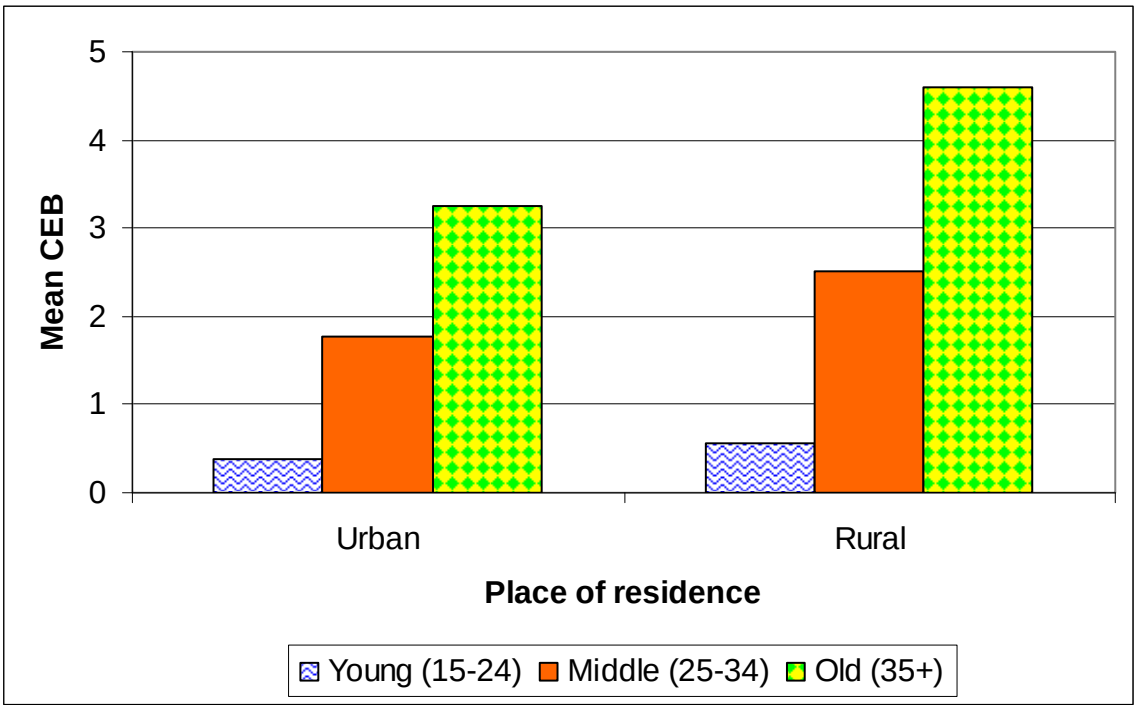


Figure 4.13 presents the mean number of children ever born to African women by place of residence. As expected, rural women have the highest mean number of children ever born compared to urban women. The oldest rural women have 4.5 mean children ever born compared to 3.2 for urban women. Middle aged, rural women have 2.5 mean numbers of children ever born compared to 1.8 for urban women. Young women in the rural areas are as likely as young urban women to have an equivalent mean number of children ever born. This pattern for young women is largely driven by the highest premarital births (see Garenne et al., 2000).

4.3.2 Age-Specific fertility rates by marital status

Figure 4.14: Age Specific Fertility Rates of African women aged 15-49 by marital status, South Africa 1998

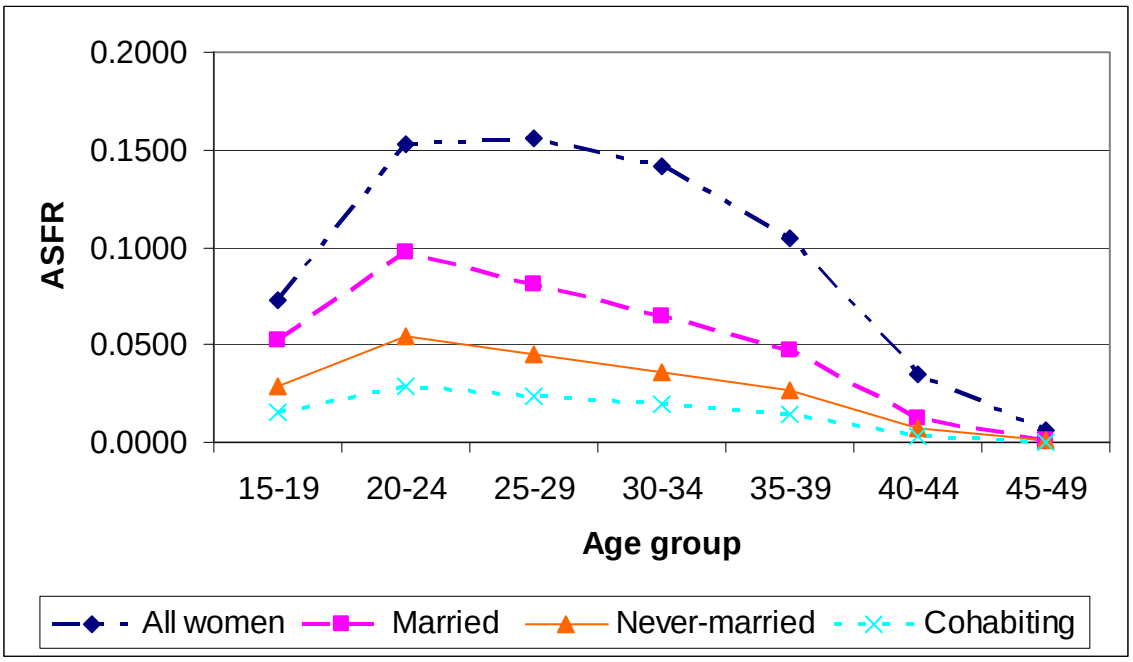


Figure 4.14 shows the age-specific fertility rates of African women. Childbearing starts early for African women and continues throughout the woman's reproductive ages. The peak age group of giving birth is 20 to 24 for married, never-married and cohabiting women. Although, the peak age group is the same for married, never-married and cohabiting African women, fertility levels of cohabiting women are among the lowest compared to those of married and never-married women.

This is also in the expected direction of estimated differences in the total fertility rates for married, never-married and cohabiting women. Married women seem to have much higher total fertility rates than never-married and cohabiting women, with 1.78 births per woman, 0.99 births per woman and 0.52 births per woman respectively. This is in the expected direction, as stated in the literature, where women continually give birth for as long as they are in a marriage (Garenne et al., 2000).

Furthermore, the high fertility levels among the married women could be due to the lower contraceptive use (Caldwell and Caldwell 1993). While among the never-married women contraceptive use is among the highest, especially after their first birth (Garenne et al., 2000). This shows that the levels of fertility among African women are not necessarily influenced by the proportion of those married.

However, if marriage was stable, and contraceptive use was not widespread in South Africa, then the expected fertility levels would be higher than the national average for married women. Furthermore, fertility levels for the never-married women would be expected to be lower.

A similar comparison of age specific African South African women's fertility to that of sub-Saharan countries shows that South African fertility is lower in the middle reproductive ages where there is no significant difference between early and late fertility. Furthermore, the fertility schedules for the African women who are never-married reflect that no woman over the age of 40 report births. Marital fertility is consistently higher than that of never-married fertility. Even though the age specific fertility rate of married women is higher, it is considerably lower than in many sub-Saharan countries, especially within the middle-reproductive ages (Cohen, 1993).

4.3.3 Timing of first birth

Figure 4.15: Survivorship of first birth for all women aged 15-49, South Africa 1998

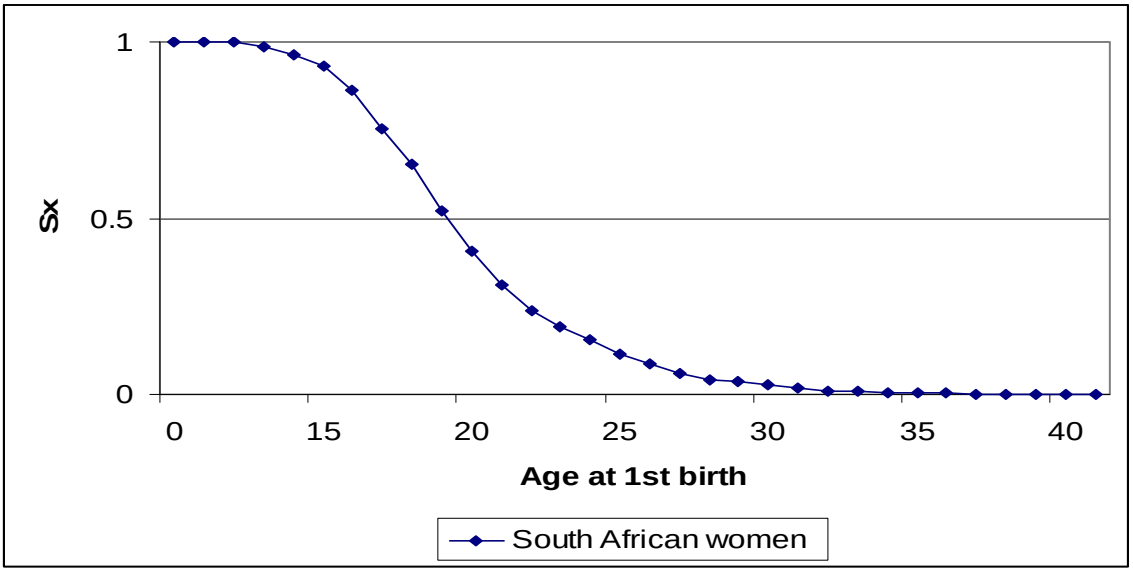


Figure 4.15 presents the survivorship probability of first birth for South African women. It shows that women start childbearing at age 12 and continue throughout their reproductive ages. Half of South African women had their first birth by age 20. This is in the expected direction, as stated in the literature, where fertility mostly occurs in younger cohorts than older cohorts. Figure 4.6 and Figure 4.7 also reveal that age at marriage has increased. This has further impacted on the age at which a woman gives birth, given that marriage is no longer stable in South Africa. Furthermore, the high probability of first birth in the younger cohorts can also be due to (Garenne et al., 2000) many of the young women tending to use contraceptives after their first births, which are often unplanned. While for older women, the situation is different.

4.3.3.1 Marital status

Figure 4.16 Survivorship of first birth for all women aged 15-49 by marital status, South Africa 1998

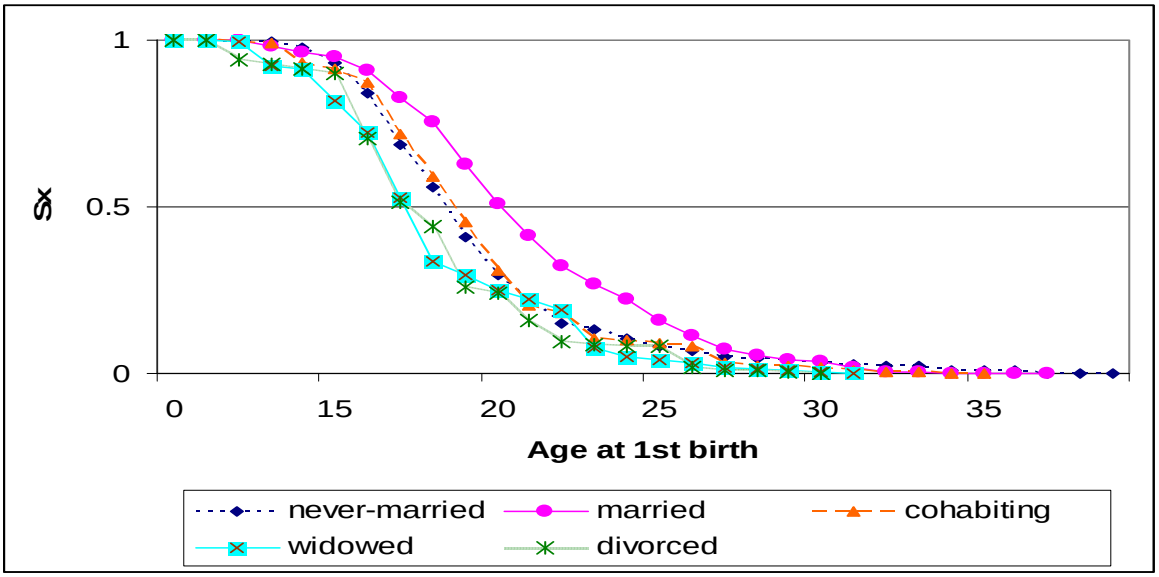


Figure 4.16 indicates the results of cumulative survivorship probabilities of first birth by marital status. Never-married and cohabiting women show similar patterns of timing of first birth. Half of the never-married and cohabiting women had their first birth by age 20. The divorced and widowed women also have similar patterns of timing of first birth, with half of them experiencing their first birth by age 18. This is in the expected direction, as stated in the literature, where marriage tends to be early among divorced and widowed women. Appendix A, further confirms these findings, with the age at which a woman have her first child being early than the age at which she get married. Married women on the other hand initiate childbearing later, with half of them experiencing their first birth by age 22. Although, the results show that married women are having their first birth late, it is not necessarily the case in South Africa given that childbearing is early and the majority of these African women enter into marriage already having the first child (Appendix A).

4.3.3.2 Urban/Rural Differentials

Figure 4.17: Survivorship of first birth for all women aged 15-49 by place of residence, South Africa 1998

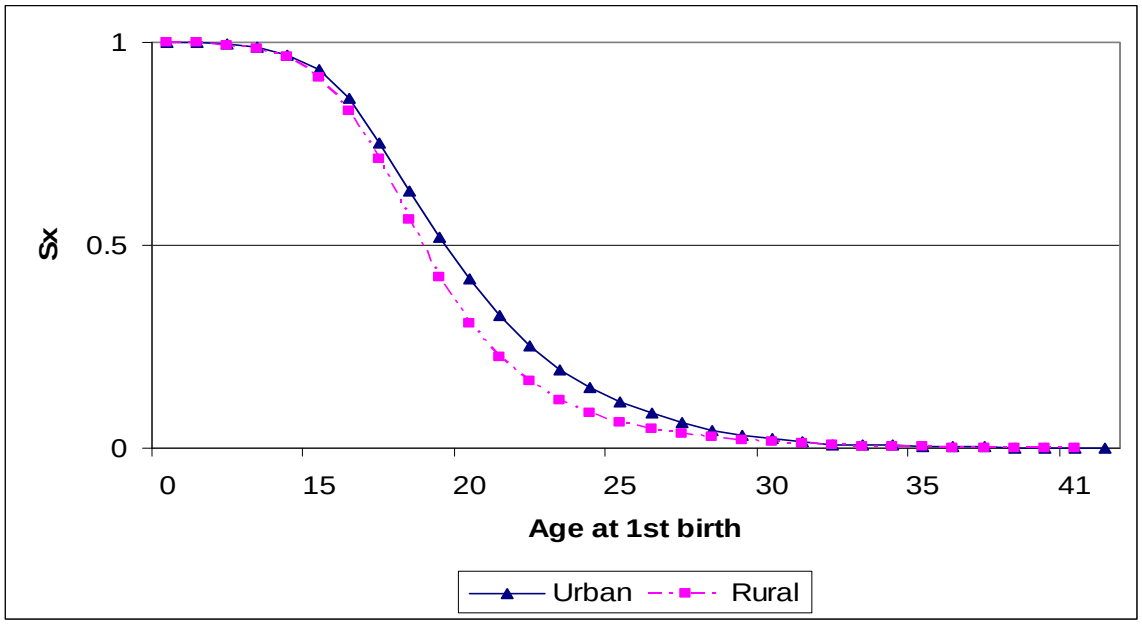


Figure 4.17 indicates the results of cumulative survivorship probabilities of first births estimated from the survival table. As expected, the probability of having a first birth is higher for rural women. Figure 4.17 also shows that half of women residing in rural areas would have had their first birth by age 20, while women residing in urban areas would have theirs by age 21. This is in the expected direction, as stated in literature, where rural woman tend to have an early first birth due to limited access to family planning programs (Garenne et al., 2000). However, the probability of a first birth for both women in rural and urban areas approaches zero towards the older ages. This shows that, as expected, all women in their older ages have already given birth to their first child.

4.3.3.3 Racial Differentials

Figure 4.18: Survivorship of first birth for all women aged 15-49 by race, South Africa 1998

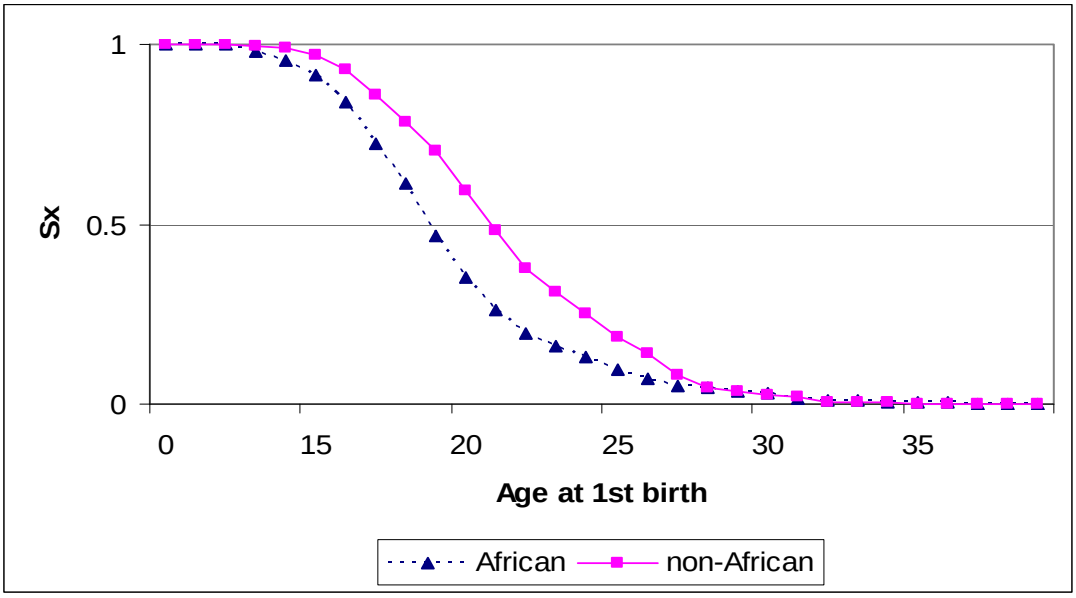


Figure 4.18 shows the results of cumulative survivorship probabilities of first births estimated from the survival table. The estimated differences in the probability of experiencing a first birth for African and non-African women are in the expected direction. Figure 4.18 shows that timing of the first birth is earlier for African women compared to non-African women. About half of African women experience their first birth by age 19 compared to age 21 for non-African women. This is in the expected direction, as stated in the literature, where African women have much higher premarital births which are most likely to be experienced as first births. The mean age at first birth for African women is 19.53and for non-African women is 21.84.

4.3.3 Survivorship probabilities of first birth for South African women by marital status and race

Figure 4.19: Survivorship of first birth for never-married women aged 15-49 by race, South Africa 1998

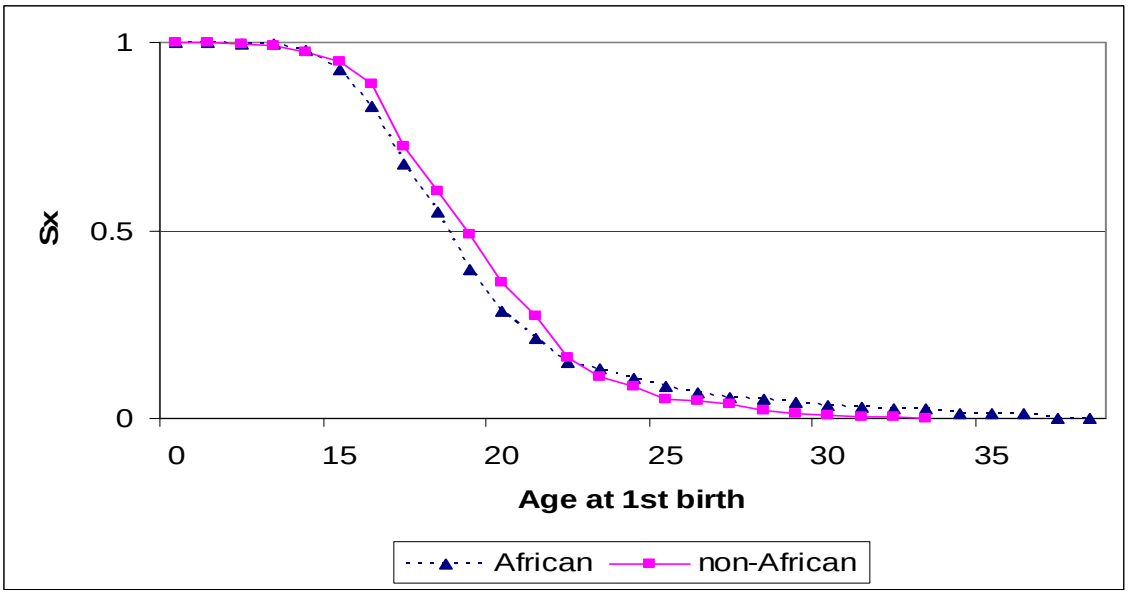


Figure 4.19 estimates the survivorship probabilities of first birth among African and non-African never-married women (probability that a woman will reach a certain age without having had a first child). African never-married women have the highest probabilities of having a first birth than non-African never-married women. Half of the African never-married women have had their first birth by age 20 compared to age 22 for non-African never-married women. This is in the expected direction given that age at marriage is late for the African women compared to the non-African women. That is, first birth precedes first marriage for African women (Appendix A). Furthermore, there are several reasons for this observation. Firstly, as expected, never-married women are likely to be young with most premarital births occurring at younger ages. Secondly, the new situation of delayed marriage among Africans, and earlier sexual intercourse, leaves an increasingly wide window of susceptibility to unplanned pregnancies for African never-married women (Garenne et al., 2000). These unplanned pregnancies are likely to be experienced as their first births.

The crossover, at age 23, could be due to high HIV/AIDS mortality among women in the reproductive ages which bias the estimates of African never-married women downwards (Dorrington, 2001). This is in the expected direction where women in the later stages of the HIV/AIDS epidemic tend to be infecund.

Figure 4.20: Survivorship of first birth for married women aged 15-49 by race, South Africa 1998

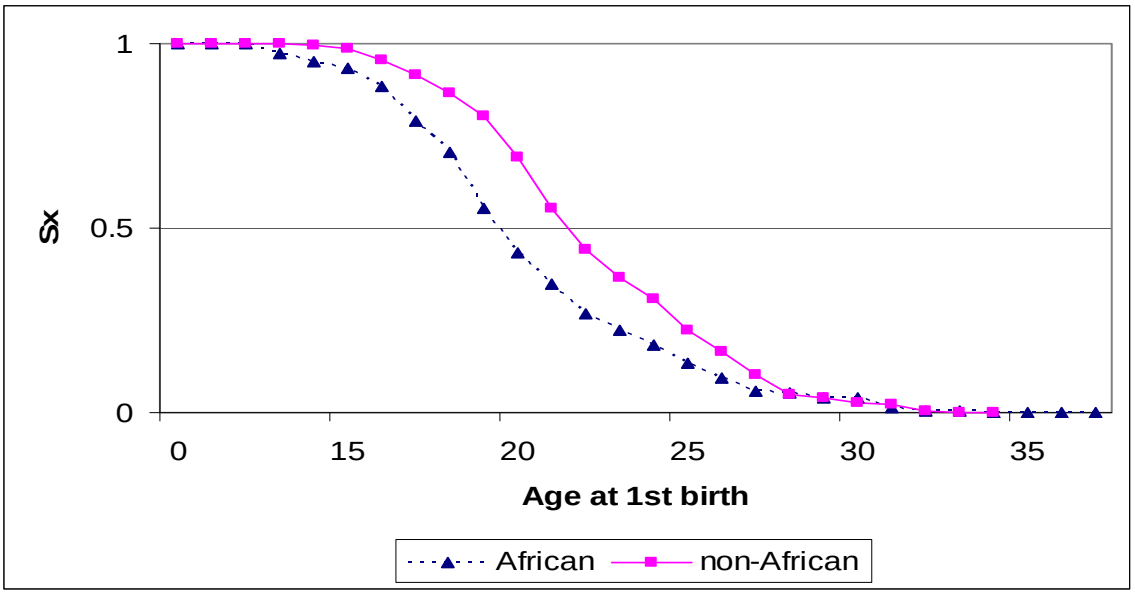


Figure 4.20 indicates that the probability of experiencing first birth is higher for married African women compared to married non-African women. The figure further shows that half of the African women who are married experience their first birth by age 20, while non-African women, who are married, experience theirs by age 23. Appendix A, also confirms that marriage is early among the non-African women compared to the African women. Furthermore, unlike the African women who their childbearing age precedes age at which they marry, childbearing for non-African women mostly occur within marriage (Appendix A). Overall, the probability of having a first child approaches zero for the older women (both African and non-African). This is because, as often stated, most of the births to married women are planned and desired (Garenne et al., 2000).

Figure 4.21: Survivorship of first birth for cohabiting women aged 15-49 by race, South Africa 1998

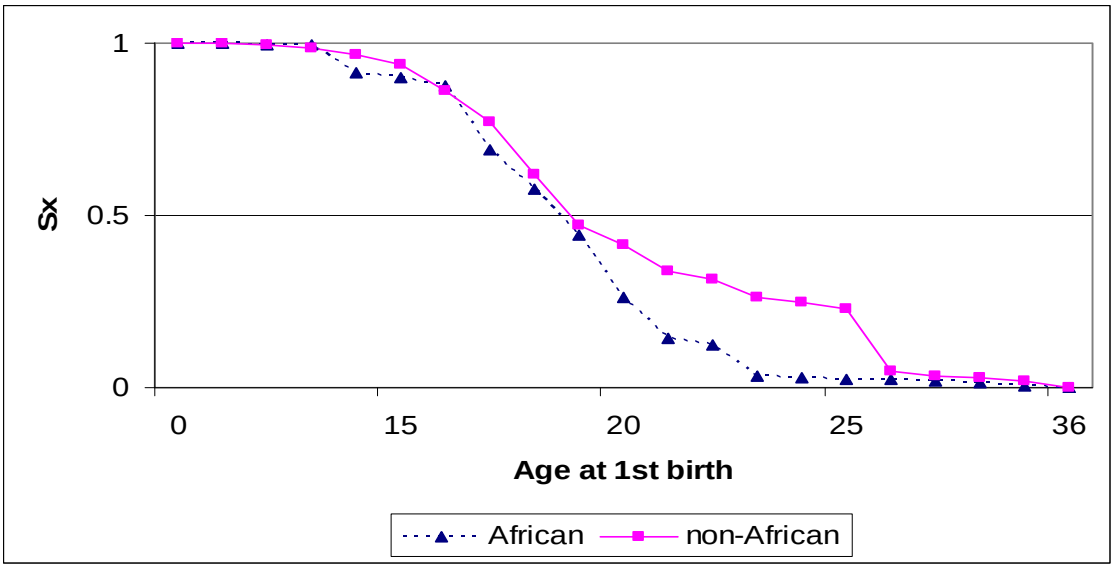


Figure 4.21 shows probabilities of surviving first birth for cohabiting women, both African and non-African. From age zero to age 20, African and non-African women cohabiting have almost similar patterns of timing of first birth. However, African cohabiting women reveal an earlier pattern of first birth, at age 13. The figure also shows that half of African and non-African cohabiting women had their first birth by age 20. The gap from age 20 to age 29, between the African and the non-African cohabiting women, distinguishes between the survivorship probabilities of timing of first birth. That is, non-African cohabiting women experience their first birth later than African cohabiting women. The difference in the displayed survival curves supports the conclusion that cohabitation is higher among African women compared to non-African women. This further explains the increasing proportion of non-marital births which are governed, at least in part, by the growth in cohabitation. As stated earlier in the literature, this is in the expected direction given that age is increasing for first marriage (Garenne et al., 2000).

4.4 Determinants of fertility

Table 4.2: Cox proportional Hazard Model of timing of first birth by chosen covariates, South Africa 1998

	Hazard ratio (HR)	**95% CI**
Age: ref(15-19)		
20-24	0.45**	[0.40:0.51]
25-29	0.28**	[0.25:0.32]
30-34	0.24**	[0.21:0.27]
35-39	0.20**	[0.17:0.22]
40-44	0.17**	[0.15:0.19]
45-49	0.17**	[0.14:0.19]
Marital status: ref(never-married)		
Married	1.17**	[1.10:1.24]
Cohabiting	1.12**	[1.04:1.21]
Widowed	1.30**	[1.13:1.47]
Divorced	1.21**	[1.05:1.40]
Not cohabiting	1.34**	[1.20:1.49]
Place of res.: ref(urban)		
Rural	0.99	[0.95:1.04]
Race: ref (African)		
Coloured	0.91**	[0.86:0.98]
White	0.73**	[0.66:0.81]
Indian	0.80**	[0.71:0.91]
Educational Attainment in years		
Edu-in-years	0.96**	[0.95:0.96]
LLR = -65711.24		

** Statistically significant at $p<0.05$

The results from the Cox proportional hazards model of timing of first birth are presented in table 4.2. The model presented aims to examine the effect of several factors, in particular the age group, marital status, place of residence, racial group, and educational attainment in years, on the timing of first birth. All age groups have a hazard ratio of less than one. This means that women in these age groups are less likely to have their first birth compared to women in the age group 15 to 19. In comparing younger cohorts with older cohorts, women in younger cohorts are likely to have a shorter time of first birth compared to women in older cohorts, with the HR of 0.45 (0.40:0.51) for women in the age group 20 to 24 and 0.17 (0.14:0.19) for women in the age group 45 to 49. This is in the expected direction where younger women have their first birth earlier than older

women, with the mean age at first birth of 18.38 years for women in age group 20 to 24 and 21 years for women in age group 45 to 49 (see Appendix A).

Looking at marital status, women who are married and cohabiting are likely to have a shorter first birth time compared to women who are never-married, with the hazards ratios of 1.17 (1.10:1.24) and 1.12 (1.04:1.21), respectively. This indicates that women who are married have 17 percent higher risk of experiencing a first birth than the never-married women, while women who are cohabiting have 12 percent higher risk of having a first birth. This is in the expected direction, as discussed in the literature, where marriage in South Africa is not stable (see Udjo, 2001) and where cohabitation is beginning to be viewed as an alternative. Furthermore, Gerenne et al (2000) mentioned that once a woman is married, she is expected to give birth and continue childbearing for as long as she is married. On the other hand, women who are widowed, divorced, and not cohabiting are likely to have a shorter first birth time compared to women who are never-married, with hazards ratios of 1.30 (1.13:1.47), 1.21 (1.05:1.40), 1.34 (1.20:1.49) respectively. The estimated hazards ratios indicate respectively that widowed, divorced, married and cohabiting women have 30, 21 and 34 percent higher risk of experiencing a first birth. This is in the expected direction (Udjo, 2001) where widowhood and divorce occurs in older cohorts, while never-married women are likely to be in the younger cohorts. This clearly affects the fertility levels of the country and the mean ages at first birth. The results presented in Appendix A also shows that widowed and divorced women have the highest mean ages at first birth compared to married and cohabiting women.

Place of residence reveals that women residing in rural areas are less likely to have a shorter first birth time compared to women residing in urban areas with the estimated hazard ratio of 0.99 (0.95:1.04). This indicates that women residing in rural areas had a one percent lower risk of experiencing a first birth compared to women residing in urban areas. The results are unexpected given that one of the hypotheses states that women in rural areas have a higher likelihood of first birth compared to women in urban areas. Furthermore, unlike women in urban areas, family planning services are limited to women in rural areas.

Coloured, white and Indian women are less likely to have an early first birth compared to African women. The estimated hazards ratios for coloured, white and Indian women are 0.91 (0.86:0.98), 0.73 (0.66:0.81), and 0.80 (0.71:0.91) respectively, indicating that coloured women had a 9 percent lower risk of experiencing a first birth compared to African women. Similarly, white and Indian women had a 27 and 20 percent lower risk of experiencing a first birth compared to African women. This is in the expected direction, as stated in the literature, where first birth is delayed among coloured, white and Indian women. The results presented in Appendix A, could also confirm these hazards ratios, with the higher mean ages of first birth at 20.25, 22.91 and 21.43 years for coloured, white, and Indian women, respectively.

The model further shows that, the more years a woman spends in school, the less likely she will have an early first birth. The estimated hazard ratio for education is 0.96 (0.95:0.96) indicating that women who spend more years in school have a 4 percent lower risk of experiencing a first birth compared to women who spend lesser years in school. This is in the expected direction, as stated in the literature, as education exposes women to services, such as family planning, which makes them delay first birth. The results in Appendix A also confirm the literature, where it shows the highest mean age of first birth at 20.87 for women who had more than 10 years of education. The Log Likelihood Ratio (-65711.24) also presents the test for the fitness of the model. Overall, the model indicates significant effects of timing of first birth between age cohort, marital status, and education years.

4.5 Conclusion

The chapter found that marriage patterns have been changing over time in South Africa. The nuptiality trend points to both late and low marriage for women aged 15 to 49. However, the almost universal marriage pattern that characterizes most sub-Saharan African countries, was not applicable for South Africa, especially among African and coloured women. Among white and Indian women marriage was more popular. Although the proportion of women ever married has been declining, the distribution of marital

types (currently married, widowed and divorced) among those ever married has not significantly changed.

The implications of marriage on fertility have been found to play a significant role. However, difference in socio-economic status makes the effect much less, especially among racial groups. That is, difference in socio-economic status might be a determining factor. There is still a big variation, on the basis of socio-economic status, between racial groups in South African, as the population at the poor end of the distribution continues to experience the worst outcomes.

CHAPTER 5

Conclusion

5.1 Introduction

This dissertation was aimed at exploring the relationship between marriage and fertility in South Africa, by examining the effect of changing marriage patterns on fertility of African women. The study was also designed to document marriage rates. This study contributes to existing literature on marriage and fertility, by utilizing one of the most comprehensive data sources (1998 SADHS) for women. The results in this study suggest that marriage has an effect on fertility in South Africa despite the existing literature that disputes this. This chapter integrates the existing literature with the results of the study.

A complete summary of major findings is provided in Section 5.2. Section 5.3 presents the implications of these findings. The study limitations and recommendations are presented in Section 5.4 and 5.5, respectively. Finally, the conclusion is found in Section 5.6.

5.2 Summary of Major Findings

5.2.1 Marital Status

The results indicate that marriage patterns in South Africa have been changing over time with a decreasing trend in the proportion of women married and an increasing trend in the proportion of women never-married and cohabiting. Prior studies also confirm these findings (Udjo, 2001; Budlender et al, 2004, and; Ziel, 2001). The proportions married have declined by 7 percent between 1995 and 2003. This decline is likely to be driven by the proportion of women who marry late and an increase in the proportion of women who do not marry. Furthermore, the proportion of women never-married and cohabiting have been increasing as a result of low proportions of married women. The proportion of women never-married has increased by 4 percent between 1995 and 2003. African women are more likely to remain in their never-married status compared other racial

groups, with about 40 percent of them not married in the ages of 30-34 compared to less than 5 percent for white and Indian women. The 20 percent of African women, who are still never-married by age 45, suggests that marriage is indeed late among Africans.

Given that the educational attainment of a woman is associated with cohabitation status and her ability to delay marriage (Swartz, 2004), results on cohabitation reveal that African women with primary, secondary, and tertiary education are less likely to be in a cohabiting union than women with no education. Lower education implies limited resources to establish legal marriages among Africans, thus, making cohabitation the next best alternative. While these findings departs from the general pattern noted in the literature review by other scholars. It can be concluded that in South Africa, educated women are as likely as uneducated women to be in a cohabiting union.

Women residing in rural area are more likely to be in cohabiting unions than women in urban areas. These findings parallel to the results pertaining to educational attainment. As often cited by Swartz (2004), women in rural areas are likely to be uneducated and unemployed. Overall, the results on cohabitation trends in South Africa suggest that African women who are cohabiting are, in general, socio-economically disadvantaged. Not only are they, on average, younger than their married counterparts, but they are also less educated and more likely to living in rural areas.

5.2.2 Marriage and Fertility

Marriage is one of the proximate determinants of fertility; however, prior research in South Africa has not been clear on the relationship between marriage patterns and fertility among African women. Udjo (2001) conducted a study on marriage patterns and fertility in South Africa but his attempt looked at factors that affect non-marital fertility. Therefore, this is an important consideration as patterns of late marriage and births occurring out of wedlock require further understanding of the context in which delayed marriage affects fertility.

In the present study, fertility levels among African women in South Africa vary significantly between marriage patterns and socio-economic factors, such as place of residence. There are clear differences in the levels of fertility among married, never-married, widowed, divorced and cohabiting women. The results on lifetime fertility found that married women have the highest mean number of children ever born, followed by widowed and cohabiting women, with 4.5 children ever born for the married and widowed women respectively and 3.6 children ever born for cohabiting women aged 35 and above. The mean numbers of children ever born for women aged between 25 and 34 years were 2.8, 2.9 and 2.4 for married, widowed and cohabiting women, respectively. Never-married women reveal the lowest mean number of children ever born, even lower than divorced women. This is due to most of the birth to never-married women tending to be their first births (Garenne et al., 2000).

The results also show that women residing in rural areas had highest mean number of children ever born in all ages compared to women residing in urban areas. The findings are in the expected direction given that rural areas are more disadvantaged than urban women. These findings are likely to be affected by the existence of unmet needs for family planning caused by poorer service access (Garenne et al., 2000).

Overall, the differences of children ever born between marital status, place of residence, and race may be attributed to the age at which these women gave birth the first time. The Kaplan-Meier survivorship probabilities of having a first birth reveals that divorced and widowed women experience their first birth earlier than never-married, married and cohabiting women. Half of them have had their first birth as early as age 18 compared to age 20 for never-married and cohabiting women and age 22 for married women. The Kaplan-Meier survivorship probabilities explain why widowed and divorced women have higher numbers of children ever born. Although half the married women had their first birth later than never-married, cohabiting, widowed and divorced women, their number of children ever born is higher possibly confirming the literature that suggests married women continue giving birth for as long as they are in marriage (Singh and Samara, 1996).

Also, in the expected direction, are the estimated differences in the risk of experiencing a first birth for African and non-African women. Non-African women have a much higher probability of not experiencing an early first birth. This is in line with the hypothesis that African women have a higher probability of experiencing an early first birth compared to non-African women. The risk of experiencing a first birth is also estimated for women residing in rural and urban areas. Women residing in urban areas have a much higher probability of not experiencing an early first birth. This was also in line with the hypothesis that rural women have a higher probability of experiencing an early first birth compared to urban women. The results from the Cox Proportional Hazard model further reveal theses differences, specifically in the confidence intervals. The wide confidence intervals from the Cox Proportional Hazard model for the estimated effects for marital status, suggests that married, cohabiting, widowed, divorced and not cohabiting women, significantly increase the their risk of experiencing an early first birth compared to never-married women. The wide confidence intervals were also observed for coloured, white and Indian women, but their risk of was lower than African women.

Despite marriage losing its universality and stability among Africans, this study showed that there is an existing relationship between marriage patterns and fertility among African women. As expected, childbearing occurs within marriage but occurs in the never-married women as well. An interesting pattern was observed for married women who have the highest mean number of children ever born compared to the never-married women, even though half of them had their first birth at a later age than the never-married, cohabiting, divorced and widowed women. This is in the expected direction (Swartz, 2004; Garenne et al., 2000) where married women are likely to continue with childbearing as long they are in marriage. Additional evidence to triangulate marriage patterns and their effects on fertility should be considered. Future research should attempt to qualitatively explore this relationship.

5.3 Implications of the Findings

The central question raised by the results of this study relates to the reason for changing marriage patterns in South Africa. What are their implications on fertility of the country? The identified features in this study, namely, the delayed marriages and the early childbearing among African women, compared to white, Indian and coloured women, cannot be adequately explained by only developmental indicators such as level of education and urbanization. The political and cultural changes have also provided a wider context within which to understand the family formation of Africans. Africans have always been the most disadvantaged and culture driven compared to whites, Indians and coloureds. Therefore, given that studies of change in marriage, divorce, cohabitation and non-marital fertility often refer to a second demographic transition, I think this study is valuable and can fit into the world of research taking culture into consideration.

5.4 Study Limitations

There are four limitations identified in the use of collected material to examine the interrelationship between marriage and fertility. The first limitation is that, South African data on marriage is cross-sectional. The second limitation is the South Africa Demographic Survey did not have data on the age of a woman at second and third birth. The third limitation arises from the fact that information on fertility, from the past period (twelve months in most of the surveys), has to be related to marital status at the time of the survey. The fourth limitation relates to the age of the data which should also be considered (1998), as marriage patterns and fertility levels have undergone a variety of changes. The levels of fertility are likely to be lower if the study were replicated with present-day data given the high use of contraceptives.

5.5 Recommendations

This study shed some light on the effects of marriage patterns on fertility in South Africa among African women. However, future research is needed to further understand the dynamics of marriage and fertility among Africans longitudinally with the use of panel data to gain an understanding of factors that delay marriage and how non-marital fertility affects South African fertility. Additionally, such research will provide the importance of a prospectively examined individual life-course perspective, rather than cross-sectional data.

For marriage to be stable and universal again, the South African government should promote marriage programmes that focus on reducing divorce rates. This may be the first step in ultimately increasing the proportions married in the country among Africans. Furthermore, marriage promotion policies should also view cohabitation as a step toward marriage. Overall, this will result in childbearing within marriage. The South African government should also come up with a policy that puts a limit on bridewealth, given that it is common among Africans.

5.6 Conclusion

The aim of this dissertation was to examine the effect of changing marriage patterns on fertility in South Africa among African women. While the continued declines in marriage have been highlighted, it would be misleading to suggest that marriage is declining among African women in South Africa as around 50 percent of these women are already married by age 40 and 45 years. This is in the expected direction where Africans continue to embark upon the process of bridewealth and those marrying, marry late, with the mean age at first marriage of 26.7 years.

Modernization and socio-economic factors have played a role in the effect of changing marriage patterns on fertility in South Africa. Factors such as age at first marriage, increasing non-marital cohabitation unions, increasing non-marital fertility and commercialization of bridewealth have influenced marriage patterns of African women and their age at childbirth.

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APPENDIX A: Men ages at first birth by selected variables

	Mean age at first birth	**Mean age at first marriage**
Age group		
15-19	16.70	16.23
20-24	18.38	18.68
25-29	19.78	20.72
30-34	20.16	21.53
35-39	20.66	21.94
40-44	21.09	22.35
45-49	20.97	22.55
Marital status		
Never-married	19.58	
Married	20.49	21.45
Cohabiting	19.43	21.81
Widowed	19.91	20.72
Divorced	20.86	21.35
Not cohabiting	19.26	21.22
Place of residence		
Urban	20.41	22.25
Rural	19.52	20.47
Racial group		
African	19.67	21.50
Non-African	21.15	21.22