THE INFLUENCE OF DEMOGRAPHIC AND SOCIOECONOMIC CHARACTERISTICS ON AGE AT FIRST MARRIAGE AMONG FEMALES IN MOZAMBIQUE

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DECLARATION

I, Khuthala Mabetha, herewith proclaim that this paper encompasses my own work. All secondary material that has been utilised in this study has been carefully acknowledged and referenced according to the American Psychological Association (APA) referencing style. This paper is being submitted to the Faculty of Humanities for a Masters Degree in the academic field of Demography and Population studies. Furthermore, I proclaim that this paper has not been submitted before in other universities for any other examination or degree purposes.

Candidate: Khuthala Mabetha

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Date:

DEDICATION

This paper is dedicated to the Almighty Lord, my beloved parents Jabulisile and Calvin Mabetha, beloved aunt and uncle, Duduzile Elsie and Khayalakhe Booi, Grandmother Kholeka Mabetha, as well as my supervisor Dr Nicole De Wet, who have supported me throughout this journey and have been my pillars of strength. I will forever be grateful for your patience and encouragement. God Bless you abundantly. I would also like to dedicate this paper to my late maternal grandmother Maria Khuzwayo who believed in me and would have been proud of my achievements. To my little sister Nondumiso, may this be an inspiration for you to work hard in life. Always aim high and you shall reap great rewards. Much love!

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LIST OF ACRONYMS

CSPro – Census and Survey Processing System

DGPS – Differential Global Positioning System

DHS – Demographic and Health Survey

GDP – Gross Domestic Product

ICRW – International Centre for Research on Women

IPPF – International Planned Parenthood Federation

MDGs – Millennium Development Goals

MICS – Multiple Indicator Cluster Survey

MZDHS – Mozambique Demographic and Health Survey

PARPA – Action Plan for the Reduction of Absolute Poverty

PSU – Primary Sampling Units

REPSSI – Regional Psychosocial Support Initiative

ROSC – Civil Society Forum For Child Rights in Mozambique

SADC – Southern African Development Community

SDGs – Sustainable Development Goals

UNFPA – United Nations Population Fund

UNICEF – United Nations Children's Fund

UN- United Nations

ABSTRACT

Context: Various reforms that are approved by the law and are intended to foster gender equality have been established by eleven nations in the Southern African Development Community Region (SADC). However, irrespective of the efforts exercised to eliminate practices that inhibit females from being able to attain their human rights, early marriage remains to be one of the discriminatory traditional practices which occur under harmful customary laws and societal norms in a number of SADC nations. The practice of early marriage violates international human rights laws that are aimed at fostering gender equality, in particular, those of females. In addition, early marriage poses a serious threat to the health and social standing of females which often results in females being politically and financially subordinated in relation to their male counterparts as well as being subjected to sexual abuse and control by males. Despite several strategies that have been established by the Mozambican government that intend to improve education and employment as well as decrease the levels of impoverishment, gender inequality is still a predominant phenomenon that leaves females being the most marginalised in relation to males, in all sociocultural, political and financial domains. This research study sought to explore whether demographic and socioeconomic characteristics including region of residence, current age of the respondent, educational level, religious affiliation, type of place of residence, and wealth status are influential on age at first marriage.

Methods: This study utilised secondary statistics acquired from the 2011 Mozambique Demographic and Health Survey. The 2011 Mozambique Demographic and Health Survey is a survey that includes a sample of 13 745 females who are between the ages 15-49 years old. The sample of respondents consisted of females who have been or are in a marital union of childbearing ages 15-49. Due to the event of interest being marriage, only 10893 females were or had been in a marital union while the remaining 2852 had never been in a union. Thus the analytic sample size utilised in this study was 10893 and the remaining 2852 cases were simply right censored.

The outcome variable was age at first marriage and the predictors were the respondent's current age, region of residence, educational level, religious affiliation, type of place of residence and wealth status. A Cox Proportional Hazard Regression model was employed in order to analyse the time of first entry into a marital union, systematically. The data analysis was done in three phases. The first phase included descriptive analyses of the variables utilised in the study through a series of frequency tables and discussions. The second stage included Kaplan-Meier graphs which were used to estimate levels of age at first marriage. The third stage included an unadjusted (bivariate) and adjusted (multivariate) Cox Regression model which was employed to determine characteristics that had an influence on age of first marriage.

Results: Hazard ratios shown in the multivariate Cox Proportional Hazard Regression model showed that the respondent's age, level of education and region of residence are significant predictors of age at first marriage among females in Mozambique. These associations indicated that early marriage is highest in Mozambique's northern regions with females residing in Manica exhibiting a 19% increased hazard ratio of exposure to early marriage, followed by females residing in Cabo Delgado who exhibit an 11% increased hazard ratio of exposure to early marriage. The lowest rates of early marriage were found in Mozambique's southern regions with females residing in Maputo exhibiting a 20% lower risk of exposure to early marriage, followed by females residing in Gaza who exhibit a 14% lower risk of exposure to early marriage and this can be attributed to cultural and societal differences. Early age of marriage is highest among females in the 15-19 year age groups and early age of marriage starts to decrease with an in increase in the female's age. This is evident from the presented hazard ratios which indicated that females aged 45-49 exhibited a 73% lower risk of exposure to early marriage, followed by females aged 40-44 who exhibited a 71% lower risk of exposure to early marriage and females aged 35-39 who exhibited a 70% lower risk, in relation to the younger-aged females. Furthermore, the more education a female attains, the more her age of marriage increases. This is evident from the results as they show that females with a primary education have a 5% higher hazard ratio of exposure to early marriage while females with a secondary education have a 21% reduced

hazard ratio of exposure, followed by females with a tertiary education who have a 46% reduced hazard ratio of exposure to early marriage.

Conclusion: The overall inference drawn from this study was that early marriage is a pervasive phenomenon that is still carried out in the northern regions of Mozambique and is particularly prevalent among young females aged 15-19 who have a primary or no education. Results demonstrated that a number of inequalities exist in the country and these inequalities are not only exclusive between males and females but also exist among young females themselves, particularly those who reside in the rural regions of Mozambique and this is due to the different lifestyles led in the rural and urban areas. Furthermore, the results showed that customary laws of marriage that have been imposed by traditional authorities specifically among citizens living in the rural areas of Mozambique are not aligned with the main civil laws that have been implemented by the Mozambican government and made rigid in order to foster gender equality and improve the situation of women. This thus suggests that there are inconsistencies in the laws and thus they do not sufficiently protect young females from entry into early marriages. Thus, the Mozambican government needs to scale up strategies that will be beneficial in eradicating the practice of early marriage**.**

Keywords: Age at first marriage, Early Marriage, Marital union, Mozambique

CHAPTER 1: INTRODUCTION

1.1 BACKGROUND

Eleven countries in the Southern African Development Community Region (SADC) have implemented a number of constitutional reforms that are intended to foster gender equality since the establishment of the first barometer- a series of surveys that form part of public discourses relating to changes occurring within society, which commenced in the year 2009 (Morna et al., 2013). The main constitutional reform that has been implemented in twelve countries located in the SADC region involves the introduction of Affirmative Action policies (Morna et al., 2013). In addition, the representation of female participation in parliament has increased significantly from the period of 2005-2011 and a National Action Plan (NAP) aimed at eradicating gender violence has been implemented (Morna & Nyakurajah, 2011). Furthermore, the 2015 SADC Gender Protocol Barometer has implemented standards that are aimed at encouraging member countries of the SADC region to enshrine gender equality and equity in the constitutions established in each of these countries (Morna et al., 2016).

In addition to the constitutional provisions that the member countries have that aim to foster gender equality, a number of marriage laws that regulate parental consent and minimum marital age have been established in the various SADC member countries. According to previous studies, eight of the countries in the SADC region have set the age of marriage at 18 years and above and these countries include Angola, Namibia, Madagascar, Mauritius, Malawi, Mozambique, South Africa and Swaziland (Morna et al., 2016). In contrast, legislative laws implemented in Zimbabwe, Zambia, Tanzania, Seychelles, Lesotho and DRC have established the minimum marital age to be between the age of 15 and 16 for females and age 18 for males (Morna et al., 2016).

Marriage has been generally described as early in the SADC region and the rest of Africa due to escalating fertility rates in the region (Arnaldo, 2004). Moreover, marriage has been deemed to be a process as opposed to a discrete event in Africa as it involves negotiations, rituals and transactions that can take a number of years to complete (Arnaldo, 2004). Furthermore, marriage exists in four different forms in all the SADC regions namely civil, religious, customary as well as mutual consent union/ cohabitation although all forms of marriages in the SADC countries of Mozambique, South Africa, Seychelles and Mauritius are required to be registered compared to other countries located in the SADC region (Morna & Dube, 2016). However, despite the efforts exerted to abolish practices that are harmful to the achievement of the rights of females as well as to regulate appropriate age of entry into marriage, early marriage remains to be one of the discriminatory traditional practices which occur under harmful customary laws and societal norms in a number of SADC nations. Child or early marriage is legally defined as any marriage that occurs when an individual is below the age of 18 years (UNICEF, 2008). Furthermore, it is a practice that is perpetuated by strong societal and traditional norms and is highly evident in rural settings compared to urban settings.

The practice of early marriage violates international human rights laws that are aimed at fostering gender equality, in particular, those of females. In addition, early marriage poses a serious threat to the health and social standing of females which often results in females being politically and economically subordinated in relation to their male counterparts as well as being subjected to sexual abuse and control by males. Age at first marriage in this study is of particular interest as it has always been considered to have a direct impact on fertility behaviour and increased likelihood of exposure to intimate partner violence, abuse, poverty and gender inequality.

The practice of entering a marital union at an early age is predominant in regions that are part of the SADC region and beyond. Many females residing in developing countries enter marital unions at an early age due to a number of economic and social constraints that force them into marriage, often leaving them with little power to reach a consensus regarding the appropriate age at which to marry or whom to marry (International Planned Parenthood Federation, 2006). Furthermore, young girls who reside in various SADC countries and are exposed to early marriage also remain vulnerable to other harmful cultural practices that occur under customary law and these harmful practices include domestic rape and violence, financial disempowerment, marriage by abduction, inability to travel freely without approval and female genital mutilation among other practices (Morna & Nyakurajah, 2011).

According to studies that have been conducted globally on the pervasiveness of early marriage, nearly half of the 331 million young females residing in underdeveloped countries will enter a marital union before the age of 20 (Jain & Kurz, 2007). Additionally, 7% of 15-19 year old females in developing countries reported having entered a marital union before they reached the age of 15 relative to 11% of females in the age range of 20-24 (Clifton & Frost, 2011). Furthermore, studies that were conducted on the prevalence of early marriage within Africa, indicated that 31% of females aged 20-24 in Zimbabwe married before their 18th birthday. Consequently, 37% of females in Tanzania married before their 15th birthday, followed by 39% in the DRC, 42% in Zambia and 50% in Tanzania. Highest rates were found in Mozambique with 52% of females having entered marriage before their 18th birthday (Loaiza Sr & Wong, 2012. Additionally, statistics provided in the Mozambique Demographic Health Survey of 2003 show that 10% of females aged 20-24 years in urban Mozambique had entered a marital union before age 15 compared to 41% of 20-24 year old females who had entered a marital union before age 18 (Population Council, 2009).

1.2 PROBLEM STATEMENT

Although the practice of early marriage is declining internationally, it is still a predominant practice that occurs specifically in the regions of South Asia and sub-Saharan Africa (Harper et al., 2014). Mozambique is regarded to be among several of the developing countries with high prevalence rates of early marriage on a global level (UNICEF, 2011). A study was conducted in 2005 that consisted of data acquired from the Mozambique Demographic and Health Survey of 1997 found that regardless of the laws implemented by the government of Mozambique that increased minimum legal marriage age to 18 years, over half of the females in Mozambique still enter a marital union before age 18 (Rock, 2013).

In addition, literature has also revealed a relationship between early marriage and being impoverished, which results in further gender inequality (Naana & Sonita, 2003; USAID, 2012; Parsons et al., 2015). For example, over half of the females living in developing countries such as Bangladesh, Mali, Mozambique and Niger, have been reported to being married before their 18th birthday (Population Reference Bureau, 2005). It is also in these countries where over 75% of the population survive on less than $2 daily (Population Reference Bureau, 2005). This is because these countries have a low Gross Domestic Product (GDP) and as a result, poverty is rife and accelerates the cycle of early marriage. As a result of these circumstances, young females are often viewed as a financial liability and are thus forced to enter early marital unions.

Overall, early marriage has been found to be associated with a number of health, demographic and socioeconomic problems. Studies indicate that females who enter a marital union at an early age are at an increased risk of being malnourished, socially isolated and depressed (Nour, 2009; Le Strat et al., 2011). Moreover, studies suggest that young

females who experience early childbearing have an increased likelihood of obtaining poor antenatal care and delivery services which may thus predispose the young mothers to birth complications such as obstructed and prolonged delivery as well as obstetric fistula which may lead into maternal mortality (Xu et al., 2003; Kasamba et al., 2013).

In addition, young females are at an increased risk of contracting HIV infection because they usually have little control over their health (Clark, 2004). This is because they usually have little power to negotiate safe-sex practices (Walker et al., 2013). Furthermore, studies indicate that exposure to early marriage has an economic impact on the young females' educational attainment as it limits the young females' prospects to enter the labour force, obtain necessary skills as well as vocational training, which may thus negatively affect her lifelong earning potential (UNESCO, 2012; Khanna et al., 2013). As a result, lack of participation in the labour force may have long-term consequences and substantively decrease economic growth in the country (Klasen & Pieters, 2012). In addition, non-participation in the labour force may impede professional development resulting in reduced productivity and investment (Parsons et al., 2015).

Considering the fact that early marriage remains to be a serious problem, a number of interventions have been established to try and combat early marriage across various African countries. For instance, the African Union (AU) introduced a two-year campaign aimed at eliminating early marriage in Africa, with Mozambique also listed as one of the target countries, during its Ministerial Meeting held on the 29th May 2014. In addition, despite efforts exerted to abolish early marriage, the practice of early marriage has not received considerable attention from a number of children and women's rights movements. Based

on this, this study thus intended to identify the demographic and socioeconomic characteristics that may be directly associated with early marriage.

1.3 RESEARCH QUESTION

What are the demographic and socioeconomic characteristics that influence age at first marriage among females in Mozambique?

1.3.1 RESEARCH OBJECTIVES

Main objective

To identify the demographic and socioeconomic characteristics that influence age at first marriage among females in Mozambique.

Specific objectives

1. To examine the levels of age at first marriage among females in Mozambique.
2. To identify the demographic and socioeconomic characteristics that influence age at first marriage among females in Mozambique.

1.4 JUSTIFICATION

Several programmes such as the Action Plan for the Reduction of Absolute Poverty (PARPA) have been established by the Mozambican government and are intended at improving schooling, healthcare, agriculture, infrastructure, developing rural settings and reducing poverty (Falck & Landfald, 2001). However, regardless of these establishments and increased enrolment in school, gender inequality is still rife in Mozambique. This is mainly due to the fact that females remain to being the most marginalised in relation to males

concerning access to education, occupational opportunities and also being exposed to early marital unions. One study confirmed that females in Mozambique remain disadvantaged in all political, economic and sociocultural spheres (Tvedten et al., 2009). Furthermore, little has been done to improve female literacy based on the fact that only 40% of females aged 14 and above are literate in Mozambique (World Bank Group, 2012). Additionally, poverty has also become feminised based on the fact that levels of poverty are accelerating at an increased rate among females compared to males (Chant, 2007). Such issues generally propagate the practice of early marriage which results in further gender disparities.

The practice of early marriage has severe implications on females as it promotes gender inequality, impoverishment, problems concerning health and intimate partner violence. Given the adverse consequences of early marriage on females, a better understanding of contributing factors is needed to address this problem. Numerous studies have concentrated on the occurrence of age at first marriage and have used different methods to answer their research questions. One study utilised a logistic regression method to establish factors that determine age of first marriage (Palamuleni, 2011). Nonetheless, a shortcoming with utilising logistic regression in inspecting the dependent variable "age at first marriage" is that the variable is continuous. This may thus disqualify logistic regression as a suitable method based on the fact that the assumption that the dependent variable needs to be a categorical dichotomous variable, has been violated.

A number of academic works have concentrated primarily on the extensiveness, implications and reasons for early marriage (Jain & Kurz, 2007). In Mozambique, numerous academic works have concentrated on the incidence of early marriage as well as the health consequences associated with early marriage. Other research has focused on the

association between ethnicity and marriage patterns in Mozambique (Arnaldo, 2004). However, no academic study has been conducted that focuses on both the socioeconomic and demographic characteristics that could be risk factors that influence age of first marriage in Mozambique. The concept of age of first marriage will be examined, using the Cox Proportional hazard regression method in order to run an analysis of changes on marriage.

This will thus provide findings that will contribute in identifying the demographic and socioeconomic characteristics that have an influence on age of first marriage among females in Mozambique. Through the identification of characteristics that place females at risk of early marriage, an initiative that has been implemented in Mozambique known as the 'Girls Forum', will benefit from the findings obtained and it will provide a platform for females to improve their decision-making powers. The forum will also assist young females to increase their sense of empowerment and to gain better insight on issues concerning marriage and sexual reproductive health.

In addition to the proposed measures that will assist in eradicating this harmful practice, the study will furthermore assist policymakers to implement programmes that will assist the government and civil society to establish improved health services and life-skills training. These will enable females to gain access to information concerning their reproductive health as well as other aspects of their lives. Furthermore, this study will contribute to public discourses pertaining to the issue of early marriage. In further elaboration, findings obtained in this study will be beneficial to the public in the sense that they will raise awareness about the consequences of entering an early marital union and may possibly result in the dissemination of pertinent and crucial information about the harsh reality of this harmful

phenomenon, thus encouraging and mobilising the public to generate solutions that may be necessary to reduce the practice of early marriage. Exposure to information concerning the harmful consequences associated with early marriage may assist to challenge the negative perceptions surrounding early marriage that are commonly held by traditionalists who believe that early marriage serves as a protective factor against premarital childbearing. This may thus reshape the perceptions and attitudes of the general public in order to obtain better insight on the situations and challenges pertinent to the practice of early marriage. Such public discourses may thus generate further scholarly research.

1.5 DEFINITION OF TERMS

1.5.1 Age at first marriage

It refers to the percentage of females who entered a marital union or cohabited with a male before reaching a specific age and it is indicated by the number of married females who fall within a particular age cohort divided by the total number of females of all marital statuses, multiply by 100 (Rutstein & Rojas, 2006). For the purposes of this study, age at first marriage has been obtained from the individual women questionnaire in the section on marriage.

1.5.2 Marriage

Marriage refers to a formally recognised consensual union that exists between a male and female. Marriage is also seen as a process that involves rituals, negotiations and transactions (Arnaldo, 2004). There are four types of marriage namely customary, religious, civil and mutual consent union (Arnaldo, 2004). This study focuses on customary or

traditional marriage that is conducted when both the bride's and groom's families reach a mutual consensus about the marriage.

1.5.3 Child Marriage

Child marriage refers to marriage that takes place before an individual celebrates his or her 18th birthday (Brown, 2012). In this study, child marriage is referred to as "early marriage".

1.5.4 Early Marriage

Early marriage refers to both official and unofficial marriages whereby a young female cohabits with her spouse before the age of 18 (UNICEF, 2005). For the purposes of this study, the existing operational definition shown above has been adopted to describe "early marriage" and the sample has been restricted to females who married at or before the age of 18 years.

1.5.5 Socioeconomic status

Socioeconomic status refers to a measure of a person's or family's financial and societal standing based on educational level, earnings and profession (Marmot et al., 2008).

CHAPTER 2: LITERATURE REVIEW

2.1 LEVELS OF AGE AT FIRST MARRIAGE IN DEVELOPING COUNTRIES

Early marriage is a phenomenon that was prevalent in traditional societies of Africa and Asia before the 1950s, and it is still a common practice in a number of countries within these continents (Garenne, 2004). Furthermore, literature suggests that little transition has occurred in the mean age at first marriage for people born between 1950 and 1970 in a number of areas in addition to little change in the prevalence of early marriage (Jensen & Thornton, 2003). Marriage is universal in majority of the sub-Saharan African nations, and it occurs at an early age, particularly among females. An approximate 40% of females between ages 20-24 years who entered a marital union before their 18th birthday, reside in sub-Saharan Africa (Walker, 2012). This alarming figure thus indicates that early marriage is largely a sub-Saharan African phenomenon (Walker, 2012).

Research by Asrese & Abebe (2014) found that a considerable proportion of females 15-24 years of age entered early marriage in the Caribbean (48%), South Asia (42%) and Latin America (29%). This clearly illustrates the magnitude of the problem of early marriage in the developing world. Regardless of the fact that most females enter marital unions in their 30s in developed societies, the reverse effect occurs in developing countries whereby 20% to 50% of females enter marital unions by the age of 18, with high early marriage rates being evident in West African countries (Walker, 2012). Age at first marriage is relatively high in Central Africa and highest in West Africa with 40% and 49% of females under the age of 19 years being in marital unions (Walker, 2012). This is in contrast to 20% of females in Northern and Southern Africa and 27%

of females in East Africa, who are in marital unions (Walker, 2012). Comparative analyses conducted across a number of countries in the developing world indicate varying rates of early marriage.

For example, increased rates of early marriage are evident in Chad where 72% of females aged 20-24 years are in marital unions, followed by 75% of females aged 20-24 years in Niger (Loaiza Sr & Wong, 2012). In addition to these statistics, in Niger, one-third of females enter marital unions before their 15th birthday whereas in Burkina Faso, half of all the females enter marital unions by the age of 18, with a few of them being married by age 15 (Brown, 2012). Statistics acquired from the Demographic and Health Survey (DHS) conducted between 2000 to 2011 show that over 60% of females between 20 to 24 years who reside in nations with high rates of early marriage, had entered a marital union before their 18th birthday, with figures indicating 75% of females in Niger, 72% in Chad, 66% in Bangladesh, 63% in Guinea and 61% in Central African Republic (Davis et al., 2013)

2.2 DEMOGRAPHIC AND SOCIOECONOMIC CHARACTERISTICS OF AGE AT FIRST MARRIAGE

2.2.1 Educational level and age at first marriage

Universally, education has been considered to be the most significant characteristic in postponing the age of marriage for females (Jain & Kurz, 2007). In Third-World societies, literature suggests that as the level of education increases, a female has less chances of getting married before her 18th birthday and the higher the likelihood that she will postpone the beginning of early gestation and reproduction (Loaiza Sr & Wong, 2012). United Nations Children's' Fund (UNICEF) research conducted in 42 countries in the developing world has

found an association between attending primary school and a reduced prospect of entering an early marital union (UNICEF,2005). Furthermore, UNICEF found that females who are primary graduates had a lower probability of getting married before the age of 18 in relation to females who have no educational qualification and conversely, females who are secondary school graduates had the lowest probability of entering a marital union before their 18th birthday in relation to the females who have no educational qualification (UNICEF, 2005). In contrast to this finding, one study found that females who are primary graduates have a higher likelihood of entering a marital union before age 18 compared to females with no education (UNICEF, 2015). However, they have a slightly lower likelihood of entering a marital union before age 15 (UNICEF, 2015).

A distinctive feature that emerged from one study conducted in sub-Saharan Africa was that 66% of females who have no educational qualification have more than five times probability to enter marital unions during their childhood compared to 13% of females with a secondary education (Loaiza Sr & Wong, 2012). Furthermore, females who are primary school graduates are two times more likely to get married at an early age in relation to females who are secondary school or tertiary graduates (Loaiza Sr & Wong, 2012). Conversely, females with no education are three times more likely to enter a marital union before age 18 as opposed to those with a secondary or higher education (Loaiza Sr & Wong, 2012). In addition, other studies demonstrate a strong relationship between increased educational attainment and decreased risk of early marriage (Lloyd, 2005; UNICEF, 2005). Furthermore, research undertaken by the ICRW established that nearly 60% of Mozambican females who have no educational qualification, enter a marital union by age 18 relative to 10% of females who have a secondary school qualification and less than 1% of females with tertiary qualifications. (ICRW, 2007).

Additionally, 67% of females aged 20-24 years with no educational qualification and 57% with a primary qualification, entered a marital union before their 18th birthday in relation to 12% of females with a secondary school qualification or tertiary qualification (Loaiza Sr & Wong, 2012). In addition to these findings, data obtained in the 2008 MICS shows that 24% of women who do not hold an educational qualification, 18% with primary school qualifications and 3% holding secondary school qualifications entered a marital union before age 15 compared to 57% of females with no education, 54% with primary school qualifications and 20% with secondary school qualifications, who entered a marital union before age 18 (Araujo et al., 2009).

Overall, in Mozambique, females who have entered marital unions at an early age have lower levels of education, restricted control over possessions and little or no authority in their new homes (Haberland et al., 2003). Based on the findings concerning the relationship between level of education and age at first marriage, it is likely that the negative impact of early marriage may also affect future generations. Additionally, research points out that children whose mothers hold little or no educational qualifications, have a lower likelihood of surviving their first year of life, are less likely to survive infancy, to have decent educational attainment, to perform well at school and to attain higher educational qualifications (Davis et al., 2013).

Furthermore, children of uneducated females have an increased likelihood of terminating their schooling before completion, enter marital unions at a young age and begin the cycle of poverty again (UNICEF, 2005). These findings thus reveal that early marriage has a negative impact on females' educational attainment. Furthermore, studies on education show that early marriage denies scholars access to a school environment that fosters self

and community development (Walker, 2012). Moreover, early marriage is also a significant driver of school dropout among females. Data obtained from a panel survey conducted in 2008 found that early marriage and pregnancy are two reasons for non-enrolment in school, with the proportion of non-enrolled females escalating from 11% at age 13 to 15% at age 14 (Fox et al., 2012). It also accelerates at 18.5% at age 15 and over 20% from age 16 onwards (Fox et al., 2012). However, in contrast to the previous findings, other research suggests that non-enrolment at school places females in serious danger of early marriage, instead of early marriage being a cause for leaving school (Lloyd, 2006).

Conversely, various literature shows education as a key driver for delayed marriage as it has been shown that females who wish to attain college education are more likely to delay entry into a marital union (Axinn & Thornton, 1992; Quisumbing & Hallman, 2003). In addition, females who have tertiary education normally have higher professional aspirations and seek occupations that are appropriate for themselves instead of entering an early marital union (Kamal, 2012). However, in contrast to this association, one study conducted in various developing nations discovered that developments in educational level and age at first marriage are not always positively associated (Mensch et al., 2005). Furthermore, the study found that the region of South and Southeast Asia which is characterised by major growth in educational completion among young people, is not considered to be a region with the greatest decrease in early marriage (Mensch et al., 2005). It is thus evident that the previous finding sees a negative association between educational level and age at first marriage.

Furthermore, a distinctive feature that emerged from an early study conducted in India found that postponing entry into marriage results from the shortage of suitable males and

this has been a major driver for the development of female literacy rather than how it is conservatively argued (Caldwell et al., 1983). In addition to these findings, a distinctive feature that emerged in one study found that parents' level of education has an important influence on the age at first marriage for male and female children (Palamuleni, 2011). One study conducted in the rural areas of Bangladesh found that young females' mothers' educational level was meaningfully correlated to higher age at first marriage of their daughters (Bates et al., 2007). Furthermore, In Africa, every year of marriage before reaching adulthood is associated with a 5.7% decrease in a female's reading ability as well as 3.5% decrease in the likelihood of finishing secondary school (Nguyen & Wodon, 2014). Based on all these findings, it can thus be argued that early marriage is correlated with lower or no education whereas later marriage is driven by higher educational attainment.

2.2.2 Wealth index and age at first marriage

A wealth index is an instrument that is widely used to measure the financial standing of families in low and middle income nations (Smits & Steendijk, 2014). Various studies consider wealth indices as effective indicators of long-term socioeconomic status, standard of living or economic state of homes (Howe et al., 2009; McKenzie, 2005; Sahn & Stifel, 2003). In this study, wealth index will be ranked according to the following Demographic and Health Survey categories: poorest, middle and richest. Poverty is a significant factor that is considered to be both a major driver and consequence of early marriage and it is habitually perpetuated by dire socioeconomic circumstances, even though it is frequently depicted as a traditional phenomenon (Davis et al., 2013).

Furthermore, the prevalence of early marriage is associated with household wealth because as wealth increases, early marriage decreases (Davis et al., 2013). In explaining the association between wealth index and age at first marriage, previous works advocate that the financial standing of a household is a substantial determining factor of age at first marriage in various societies (Garenne, 2004). In addition to the previous finding, one study confirmed that the social and financial state of the family home impacts exposure to marriage among young females (Axinn & Thornton, 1992). This is because the families of the young females consider marrying off their children as a strategy to reduce their economic hardships and to accumulate resources through bride wealth and obtaining future financial sustenance from the husband (Bagnol & Ernesto, 2003).

In a global analysis conducted by the United Nations Population Fund across 78 developing countries, data obtained from the analysis showed that more than 54% of females in the poorest wealth quintiles are adolescent brides in relation to only 16% of females residing in 20% of the most affluent households (Loaiza Sr & Wong, 2012). Furthermore, females who come from the poorest 40% of homes, have an increased likelihood of entering a marital union before their 18th birthday in relation to females who come from affluent households (Davis et al., 2013). In a study conducted in 49 countries among females aged 20-24, findings obtained from the study showed that 20% of the impoverished households are exposed to early marriage across all the countries (Jain & Kurz, 2007). Furthermore, in Nigeria, 80% of the poorest females enter a marital union before their 18th birthday, in relation to 22% of the most affluent females (United Nations Population Fund, 2003). In addition to these findings, literature reviewed found that females who enter a marital union as young girls, have restricted employment prospects and have a higher likelihood of residing in poorer households (MacQuarrie & Edmeades, 2015; United Nations, 1988).

Mozambique has been ranked among one of the impoverished nations globally, for over two decades (Undie et al., 2009). In explaining the association between wealth index and age at first marriage within the context of Mozambique, research indicates that household prosperity has an effect on predominance of early marriage in all wealth quintiles. Data obtained from the MICS conducted in Mozambique in 2008 shows that 25.7% of females who entered a marital union before age 15, fall within the poorest wealth index quintile compared to 7.1% of females in the richest wealth index quintile (Araujo et al., 2009). Conversely, 60.5% of females who entered a marital union before age 18, fall within the poorest wealth index quintile compared to 34.1% of females in the richest wealth index (Araujo et al., 2009).

In contrast to these findings, a distinctive feature that emerged from one study suggested that in some situations where females have low socioeconomic standing, early marriage is a pivotal strategy for reducing household poverty and economic burden placed by females on their families (Levine et al., 2008). Furthermore, various culture-specific works have indicated that most families with lower socio-economic class generally expect early marriage due to prevalent low socio-economic standing, traditional lifestyles, wedding gifts and chastity for females and sustenance of family responsibility, incorporation and continuance (Aziz & Maloney, 1985; Saha & Bairagi, 2007). Contrary to all the findings, a study conducted recently in Maputo by UNICEF reported that wealth status has a negative relationship with early marriage (UNICEF, 2015). Instead, rates of early marriage are largely explicated by regional and religious characteristics rather than social or economic influences (UNICEF, 2015). Another distinctive feature that emerged in one study showed that regardless of the fact that early marriage is generally more pervasive in families who fall in the poorest wealth quintiles, the practice is fundamentally universal and may almost be

common even among families who fall in the richest wealth quintiles (International Planned Parenthood Federation, 2006).

2.2.3 Type of place of residence and age at first marriage

Residence refers to a place in which an individual or individuals live. In this study, residence refers to rural and urban residence. Previous works have shown that residing in a rural setting escalates the probability of entering a marital union at an early age (Jain & Kurz, 2007). Furthermore, one study has shown that the average age at first marriage of females who live in urban settings is 1.5 years greater than that of females who live in rural areas (Westoff, 2003). A number of global rural and urban differences in age at first marriage have been shown in a number of developing countries. For instance, great urban and rural differences are evident in Senegal, whereby 15% of females residing in urban areas and 53% residing in rural areas are married, followed by 55% of urban females and 35% of females residing in rural areas (UNICEF, 2005). In addition, 44% of females in rural areas, have been discovered to have a higher likelihood of entering marriage at an early age compared to 22% of their urban counterparts, in the developing world (Loaiza Sr & Wong, 2012).

Furthermore, research conducted previously proposes that delays in entry to early marital union are more apparent in urban settings in relation to rural settings (Garenne, 2004; Mensch et al., 2005). Studies further advocate that the combination of adverse financial circumstances and increased accommodation charges in several cities have perpetuated the delays in marrying early, which has resulted in the development of a fertility transition in sub-Saharan Africa (Gurmu & Mace, 2008; Shapiro, 2015). Reasons for the delay in marriage according to literature is that increasing urbanisation is likely to be linked with postponing a

marital union due to the lifestyle that people have grown accustomed to in the urban areas (Mensch et al., 2005). In addition, one study found that women who live in urban spaces are exposed to contemporary beliefs that propagate marrying later on in life (Singh & Samara, 1996). They are also less likely to be controlled by their families who decide the time of marriage and choice of spouse (Singh & Samara, 1996). In contrast, early marriage is predominant in rural settings because of family structures that foster entry into an early marital union and pregnancy (United Nations, 1990). Additionally, early marriage is commonly practiced in rural societies because people residing in those societies tend to have traditional beliefs and attitudes, are less affected by events occurring outside of their communities and have limited means for securing the necessities of the young females (International Planned Parenthood Federation, 2006).

In contrast to the findings mentioned above, a distinctive feature that emerged from the study conducted by the UNICEF showed that females who reside in the urban areas of Rwanda and Turkmenistan had an increased likelihood of entering a marital union before their 18th birthday, in relation to their rural counterparts (UNICEF, 2005). From the foregoing, the conclusion that the United Nations Population Fund (UNFPA) reached pertaining to the association between place of residence and age at first marriage is that there is thus a remarkable correlation between lower levels of early marriage and advanced stages of expansion such as urban residence, secondary or tertiary education and wealth (Loaiza Sr & Wong, 2012).

2.2.4 Region of residence and age at first marriage

Region of residence refers to the topographical area in which a respondent was questioned (Palamuleni, 2011). Age at first marriage also varies considerably by region of residence. Province of residence is similarly effective in explaining age at first marriage based on the fact that diverse provinces may have diverse levels of socioeconomic progress and may be traditionally heterogeneous, thus resulting in differences in the time of first marriage (Palamuleni, 2011). Furthermore, literature suggests that an individual's place of birth within a country also has an effect on early marriage (Davis et al., 2013). In many countries such as Mozambique and Pakistan, females born between the years 1985 and 1989 had an increased probability of getting married in their childhood years compared to females born in the years 1950 and 1954 who were more likely to have entered marital unions in their childhood years (Nguyen & Wodon, 2012).

As in most developing nations, early marriage is prevalent in Mozambique. With regards to the regional differentials pertaining to age at first marriage, high rates of early marriage occur in the northern areas of Mozambique, with a ratio of one in five females being married before age 15 in the province of Niassa (Jain & Kurz, 2006; UNICEF, 2014). Statistics provided by the 2008 MICS indicate that the practice is predominant in Mozambique's central and northern regions (Araujo et al., 2009). In illustrating the prevalence of early marriages across provincial levels, the survey indicated that 70% of females in Cabo Delgado entered marriage before their 18th birthday, followed by 59% of females in Niassa, 58% in Nampula and Manica, 57% in Zambezia and the lowest percentage constituting of only 25% of females in Maputo City (Araujo et al., 2009).

Furthermore, significant differences in the rates of early marriage were observed in Mozambique's northern, central and southern regions in 2010 (UNICEF, 2011). The southern provinces (Gaza, Inhambane and Maputo) had prevalence rates less than 10%, followed by the central areas namely Manica, Tete and Sofala, with an average rate of early marriage of 20% (UNICEF, 2011). In addition, regions in the north of Mozambique (Niassa and Cabo Delgado) had the highest percentages which were 24% and 30% respectively (UNICEF, 2011). According to a study conducted by the ICRW in 2007, results obtained from a logistic regression analysis showing associated factors of early marriage in Mozambique found that region of residence was positively correlated with early marriage (ICRW, 2007). This indicates that knowledge of the specific area in which the phenomenon occurs, is pivotal in discussing the issue (ICRW, 2007).

Overall, Mozambique is a patriarchal male-dominated society that results from combined outcomes of ancient effects and current radical and financial advances (Sheldon, 2002). By tradition, early marriage was considered as a way to create political or financial coalitions between cultural clans and having young spouses was considered to be a symbol of affluence and stature (Arnaldo, 2004). A number of possible reasons for the differentials in age at first marriage through the various areas can be attributed to a number of factors. Prior research introduces a new dynamic by showing that polygamous relationships are also common in Mozambique with almost a quarter of females aged 15-49 in a polygamous relationship (UNICEF, 2011).

Furthermore, despite the fact that polygamy is not legal in Mozambique, it is predominantly prevalent in the central provinces with around a third of females in Manica, Tete and Sofala in such marital unions (UNICEF, 2011). In addition to these findings, prior research has

shown that in the provinces of southern Mozambique such as Maputo, Gaza and Inhambane, the practice of paying bride price has played a critical part in ensuring marital stability and thus became a new source of wealth for the female's family of origin (Isaacman & Stephen, 1980). Furthermore, in Mozambique's Northern provinces namely Niassa, Cabo Delgado and Nampula, bride purchase did not exist although the husband's family usually offered small gifts to the wife's family at the time of the marriage (Isaacman & Stephen, 1980). From the foregoing, it can thus be argued that these customs create an economic incentive for parents when they marry off their daughters.

2.2.5 Respondent's current age and age at first marriage

The most crucial variable in demographic enquiry is age due to the fact that crucial events such as fertility, mortality, marriage and divorce are reliant on age (Palamuleni, 2011). In explaining the link between current age and age at first marriage, a study conducted in the USA found that several young adults are postponing marriage despite the high expectations that they will eventually marry (Thornton et al., 2008). A study that was conducted in the former Soviet Asia found that a substantial number of females aged 20-24 have entered a marital union before age 18 in relation to females aged 30-34 (Mensch et al., 2005). In addition, a study that revised patterns, changes and elements of female age at first marriage in 32 sub-Saharan African nations over the past 50 years and estimates of the average age at first marriage, found that average age at first marriage continues to be low particularly among females aged 15-19 for majority of the nations, although with the exception of Namibia, Botswana and South Africa, where it is much higher (Garenne, 2004).

One of the reasons as to why younger generations are less likely to marry young is due to increased educational attainment as well as socioeconomic transition over time (Kamal, 2012). Conversely, studies further indicate that females aged 45-49 years had twice the likelihood of getting married earlier than females aged 20-24 (Kamal, 2012). Additionally, females aged 25-34 had an increased probability of marrying earlier than females aged 15-24 years. (Ayiga & Rampagane, 2013). A possible reason that can be suggested for these differences may possibly be ascribed to the fact that values about marriage are changing over time.

In explaining the association between age and age at first marriage within the context of Mozambique, statistics obtained from the Mozambique Multiple Indicator Cluster Survey of 2008 when broken down by age group, shows that the incidence of early marriage declines among younger females compared to those of more advanced ages (Araujo et al., 2009). Statistics provided indicated that 11% of females in the 15-19 year age cohort entered a marital union at an early age compared to 21% of females in the 45-49 age cohort and 23% in the 40-44 age cohort (Araujo et al., 2009). Evidence provided by research for these differences specifies that a postponed marital union is connected with modifications in females' status, particularly improved school enrolment and employment opportunities (Kaufmann & Meekers, 1998). Contrary to these findings, data obtained in other regions shows a substantial decrease in the practice of early marriage. For instance, literature shows that the decrease in the practice of early marriage is particularly highest among females residing in the Middle East whereby a 49% decrease is evident among females aged 20-24 years (Mensch et al., 2005). It is also evident among females aged 40-44 years who entered a marital union before age 18, and a 38% decrease is witnessed in the proportion of females who entered a marital union by age 20 (Mensch et al., 2005).

2.2.6 Religious affiliation and age at first marriage

Previous works have found that there is a strong association between being religious and being wedded (Uecker et al., 2007). Furthermore, spiritual rules and customs have an impact on an individual's orientation concerning matrimony and pregnancy, thus religion is likely to have an impact on a female's age at first marriage (Ikamari, 2005). Additionally, research confirms that seniors presume that they have a spiritual duty to ensure that their sons and daughters are in marital unions (Dixon, 1971). Studies have shown a number of variations in the average age at marriage for several spiritual groups, globally. Furthermore, research suggests that two monotheist religions of Middle Eastern origin which are often bypassed in the demographic literature are Christianity and Islam (Garenne, 2004). Both these religions play a significant role in early marriage as they give high value to marriage and to chastity of females prior to marriage and may thus have an influence on age at first marriage (Garenne, 2004). In addition to these findings, one study which studied spiritual differences in the timing of marriage among females, established that females who follow the Protestant denomination get married earlier than Catholic females (Lehrer, 2000).

Furthermore, Protestants in general, and conservative Protestants specifically, marry earlier than those who do not follow any religious denominations (South, 2001; Lehrer, 2004; Thornton et al., 1992; Xu et al., 2005). The reason for this variation is that Protestant leaders emphasise marriage and strongly urge their members to enter marital unions and once they have done so, to avoid divorce except for compelling reasons (Wilson & Musick, 1996). In addition, conservative Protestants place an emphasis on marriage and family life and it is this emphasis that bolsters and perpetuates early marriage (Lehrer, 2004; Xu et al., 2005). In contrast, Catholicism has been marked by an orientation that supports marriage that is less

robust, and modifications in American Catholicism in the years 1960s, compelled pastors and spiritual leaders to moderate the significance of marriage (Xu et al., 2005). This was mainly because the Catholic congregation became less motivated to receive the church's traditional lessons on matrimony, which they gradually regarded as a distinct choice (Xu et al., 2005).

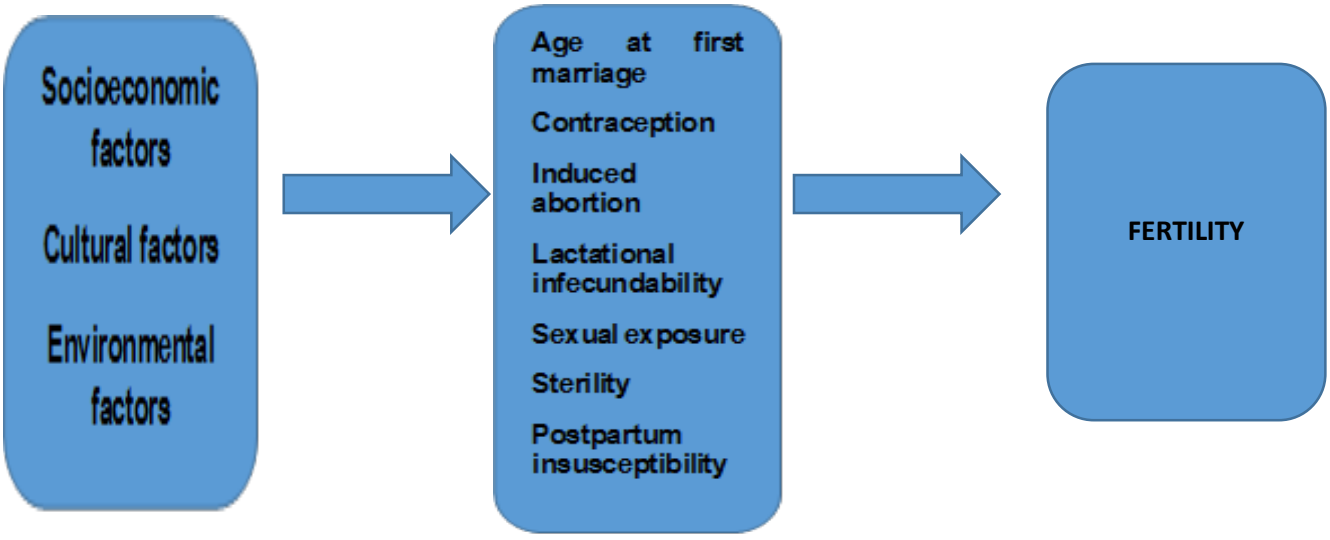
In addition to these findings, it has been found that the standard age of first marriage for Catholic females lies on one end of the Protestant and Mormon faith and on the other end of the Jews and religiously unaffiliated (Rendon et al., 2014). Moreover, Catholics have also been regarded to promote religious values that encourage traditional family life and kinship which may thus result in earlier marital unions (Rendon et al., 2014). In addition to these findings, one study revealed that low levels of religious participation are associated with an increased inclination to cohabit with a partner and a reduced need to marry (Thornton et al., 1992). This thus implies that females who are less religious are more likely to cohabit instead of entering a marital union when compared with the religiously affiliated (Xu et al., 2005). In addition, respondents who are not religiously affiliated display a greater tendency towards a union involving cohabitation and a lower likelihood to enter a marital union, in relation to those who do not follow any religious denomination and these outcomes occur mostly among females than males (Xu et al., 2005).

2.3 THEORETICAL AND CONCEPTUAL FRAMEWORK

2.3.1 Theoretical Framework

In analysing characteristics that have an influence on the age of first marriage, this study adopted Bongaart's Direct Determinants of Fertility Framework that is shown below. John Bongaart identifies factors that influence fertility behaviour with the main aim to understand variations in the levels of fertility behaviour between populations. According to Bongaarts (1978), indirect determinants such as socioeconomic, cultural and environmental factors operate on the biological and behavioural factors known as the intermediate variables in order to indirectly affect fertility. Bongaarts identifies the intermediate variables as namely age of first marriage, contraception, abortion, lactational infecundability, sexual exposure, sterility and postpartum insusceptibility as the main direct determinants of fertility. Bongaarts further postulates that only four of the central determinants of fertility differentials are marriage, contraception, abortion and lactational infecundability. The framework has been shown below:

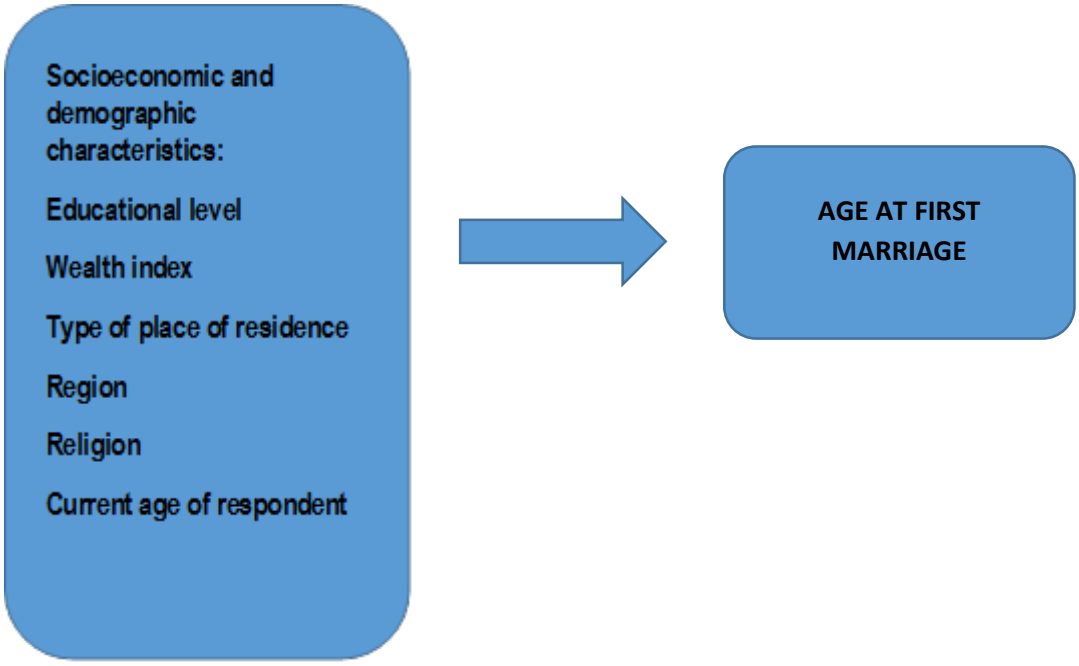
Figure 2.1: Bongaarts' Framework of Direct Determinants of Fertility



2.3.2 Conceptual Framework

The direct determinants of fertility framework that has been developed by Bongaarts has been modified by focusing on the indirect determinants of fertility as having a direct influence on the intermediary variable "age at first marriage". This conceptual framework is presented beneath and it has been modified from Bongaarts' Direct Determinants of Fertility Framework. In the framework below, demographic and socioeconomic characteristics such as educational level, wealth index, type of place of residence, region, religion and current age of the respondent are shown to have a direct influence on age at first marriage.

Figure 2.2: Conceptual Framework Adapted from Bongaarts' Direct Determinants of Fertility Framework, 1978.



CHAPTER 3: METHODOLOGY

3.1. INTRODUCTION

This chapter addresses the data and methods that were used in this study. Particular reference will be devoted to the data source, description of the data source, study population, sample size, questionnaire design, fieldwork, research hypothesis, variables used in the study, ethical issues, data management and data analysis.

3.2 Study design

This study utilised secondary statistics acquired from the Mozambique Demographic and Health Survey (MZDHS) of 2011. It is a survey that is representative of 13 745 females of childbearing ages 15-49 (INE, MISAU and ICF International, 2013). Information-gathering was conducted from June to November 2011. The data obtained from the women's questionnaire provides sufficient information on the demographic and socioeconomic variables that are necessary to examine age at first marriage in Mozambique.

3.3 Description of the data source

The 2011 MZDHS

The sampling frame employed in the 2011 MZDHS is a two-stage cluster sampling design that is intended to gather national and regional statistics on inhabitants and health pointers. In the first stage, 611 primary sampling units were recognised using a Differential Global Positioning System (DGPS.) (Mboane & Bhatta, 2015). In stage two of data collection, a

proportion of 13 964 homes were unsystematically chosen and these included 20 homes in urban Primary Sampling Units (PSU) and 25 households in rural Primary Sampling Units (PSU). The sample obtained only consisted of respondents residing in households and respondents who were currently not in their normal places of dwelling were excluded from the sample. Mozambique is separated into eleven provinces and 128 neighbourhoods and the provinces are separated into three geographic regions namely North, Central and South (Mboane & Bhatta, 2015).

In addition, 69% of the people live in rural Mozambique and subsistence farming is the major form of economic activity (Mboane & Bhatta, 2015). Mozambique was stratified into 11 provinces namely Niassa, Cabo Delgado, Nampula, Zambezia, Tete, Manica, Sofala, Inhambane, Gaza, Maputo Provincia and Maputo Cidade. In each province, 55 Primary Sampling Units were utilised with the exception of Nampula which had 60 Primary Sampling Units, Zambezia and Sofala (58 Primary Sampling Units each), Maputo Province (61 Primary Sampling Units) and Maputo City (65 Primary Sampling Units). The selected sampling units existed due to increased variability in sociodemographic characteristics and low coverage indicators for females between age groups 15-49 and children below the age of 5.

3.4 Study population

The population of interest that this study focused on, comprised only of females who have been in a marital union, primarily females of reproductive ages 15-49. The study focused specifically on females who married before their 18^{th} birthday.

3.5 Sample size

The sample used in this study includes all the females who were respondents in the survey. The original number of participants was 13 745. The original sample was reduced to 10 893 cases that comprises a sample of ever-married females only. Females who have never been in a union were not accounted for, in order to be able to yield accurate results. They have instead, remained censored.

3.6 Questionnaire design

The MZDHS is made up of three questionnaires that are utilised to collect survey statistics namely a questionnaire for households, questionnaire for women and questionnaire for men. The questionnaire also contains information on topics pertaining to contextual characteristics, reproductive behaviour and intentions, contraception, pregnancy, childbirth and postpartum care, breastfeeding and nourishment, children's wellbeing, social standing of females, HIV and other sexually transmitted infections and husband's background. For this study, the women's questionnaire included socioeconomic and demographic questions on age, marital status, region, residence, religion, education and wealth index, in order to provide vital information on the characteristics that are likely to influence the outcome variable.

3.7 Fieldwork

The first step involved in designing the questionnaire involved designing the proportion of respondents and developing the questionnaire to achieve particular country needs. In stage

two, enumerators were trained to conduct information-gathering. Suitable homes and individual respondents were selected and questioned in person, using tablet computers. In the third stage, the data collected by the enumerators was processed through a system of editing, coding as well as entering and verifying the data in order to check if the data was consistent. Data was captured using mini-computers equipped with a Census and Survey Processing System (CSPro) software. In the final stage, the data was then analysed and the final report, which was published in Portuguese, was compiled for publication and the survey results were then circulated within the country.

3.8 Research hypothesis

Ha: Demographic and socioeconomic characteristics are associated with the age of first marriage among females in Mozambique.

Ho: Demographic and socioeconomic characteristics are NOT associated with the age of first marriage among females in Mozambique.

3.9 Variables used in the study

3.9.1 Definition of the dependent variable

The dependent variable in this study is “age at first marriage”. Age at first marriage was defined by asking the question “How old were you when you first started living with him?” The “him” refers to the husbands of the females who are/ were ever married. This study focused on the females who married before age 18. The question “ How old were you when you first started living with him” was obtained from the survey and was used as a proxy to

measure the age at which a female entered her first marital union, based on the fact that no direct question on age at marriage was provided.

3.9.2 Definition of the independent variables.

The independent variables that this study utilised are of a socioeconomic and demographic nature. The variables "current age of the respondent", "region" and "religion" were used as demographic indicators. Conversely, "residence", "educational level" and "wealth index" were used as socioeconomic indicators. These variables assist in providing a profile of the sample of females who were participants. Furthermore, selection of these variables was guided by the available literature reviewed by previous scholars. In addition, these are variables that are known to have an influence on age at first marriage across various developing countries. In terms of the construction of some of the variables, the variable "current age of the respondent" has been grouped into five year age intervals. The most crucial variable in demographic enquiry is age due to the fact that crucial events such as fertility, mortality, marriage and divorce are reliant on age (Palamuleni, 2011). "Current age of the respondent" refers to the ages of the female respondents who were part of the selected sample during the present day when the study was conducted. Furthermore, "region" refers to an area within a particular country. With regards to region of residence, Mozambique has eleven provinces namely Niassa, Cabo Delgado, Nampula, Zambezia, Tete, Manica, Sofala, Inhambane, Gaza, Maputo Cidade and Maputo Provincia. However, the provinces "Maputo Cidade" and "Maputo Provincia" were combined to form one province which is "Maputo".

The "religion" variable was initially comprised of eight religious affiliations which were "Catholic, Islamic, Zion, Evangelical/ Pentecostal, Anglican, No religion, Protestant and

Other. The categories of interest in this study were Catholic, Protestant, No religion and Other. The categories "Islamic, Zion, Evangelical/ Pentecostal and Anglican" have all been combined with members of "Other" faiths category. An additional category was an unspecified "99". The unspecified "99" category was combined with members of "Other" faiths based on the fact that the religious faith was unknown. In addition to these variables, "residence" was dichotomised as rural residence and urban residence. The variable "educational level" was recoded as 1. No education, 2. Primary education, 3. Secondary education and 4. Higher education. Additionally, in the questionnaire, wealth index was initially coded as 1. Poorest, 2. Poorer, 3. Middle, 4. Richer and 5. Richest. However, for the purposes of this study, the variable was recoded and the categories were merged into three categories i.e. 1. Poorest was combined with the category "poorer" and 2. Richest was combined with the category "richer" and 3. Middle. Table 3.1 below shows all the independent variables that have been used in this study. The variables have been arranged according to demographic and socioeconomic characteristics.

Table 3.1: Main variables used in the study and their descriptions

Independent Variables:	**Definitions**	**Description**
Age at first marriage	It denotes the age at which a female first entered marriage. It is represented by the question "How old were you when you first started living with him?" The "him" refers to the husbands of the females.	Count
Independent variables:		
DEMOGRAPHIC **Region of residence**	Refers to province of residence: *recoded Niassa (1) Cabo Delgado (2) Nampula (3) Zambezia (4) Tete (5) Manica (6) Sofala (7) Inhambane (8) Gaza (9) Maputo Provincia and Maputo Cidade (combined to form "Maputo" (10)	Categorical
Current age of the respondent	15-19 20-24 25-29 30-34 35-39 40-44 45-49	Continuous
Religious affiliation	Respondent's religious affiliation * recoded Protestant (1) Catholic (2) Other (3) No religion (4)	Categorical

SOCIOECONOMIC **Educational level**	Respondent's highest educational level: No education Primary Secondary Higher	Categorical
Wealth Index	Respondent's wealth/ economic status: * recoded Poorest (1) Middle (2) Richest (3)	Categorical
Type of place of residence	Urban Rural	Categorical

3.10 Ethical issues

This study was conducted using secondary statistics acquired from the 2011 MZDHS datasets. The survey was conducted anonymously and therefore informed consent was not compulsory. This is simply because analysis of the data did not include any individual communication with the respondents. As an outcome, there were no issues relating to privacy because the names and other personal information of the respondents were not revealed in the datasets.

3.11 Data management

The 2011 MZDHS data was downloaded from the DHS website. The data required was transformed into STATA format and a statistical program known as STATA 12 was utilised for examining the acquired information. The covariates that were utilised in this study have been extracted from the women's individual recode module acquired from the DHS website. There were observations that were missing in the dependent variable and this is because the females who had no responses had not experienced the endpoint of interest in this study which was "marriage". Due to the existence of this shortcoming, the incomplete observations were simply censored.

3.12 Data analysis

The examination of the statistics obtained in the 2011 MZDHS was conducted in three phases. The first phase included a descriptive analysis of the variables utilised in the study through a series of frequency tables and discussions. The Kaplan-Meier graphs were also utilised to examine levels of age at first marriage of females in Mozambique as well as the levels of age at first marriage across all the predictors. Stage two included a bivariate analysis of all the variables in order to examine whether each independent variable had an influence on the dependent variable. In order to examine if there was an association between each predictor and the dependent variable, a series of unadjusted Cox regression models were utilised. The third and final stage included a multivariate Cox regression model of all the independent variables which was run simultaneously and it indicated all the variables that are significant and that have an influence on the dependent variable.

The study utilised the Cox regression method which is a method of survival analysis in statistics that looks at the period within which an event takes place in relation to one or more variables that may be associated with that period (Steele, 2005). This simply means that the Cox proportional hazard regression looks at the probability of an event taking place at a specific period if an individual survives to a specific age and events can consist of birth, death or matrimony. **In this study, age at first marriage has been treated as a time-to-event variable as it refers to the time until an individual experiences the occurrence of the event of interest (marriage) provided that an individual survives to a specific age and the survival time can be measured in years.** In this study, the Cox regression model was utilised to determine the hazard risk or likelihood of entering an early marital union. The dependent variable, age at first marriage, represents the hazard since it portrays the prospect of getting married in childhood provided that the respondent survives to a specific age. The equation of the Cox regression model is as follows:

h_i(t)= h_o(t) exp ($B_I X_{I1}$+$B_2 x_{i2}$+……..+$B_n x_{in}$)

h_i(t)= hazard function for individual i

h_o(t) = baseline hazard function

$X_{i1,}X_{i2,\ldots\ldots\ldots,}X_{in}$ =covariates

$B_{1,}B_{2,\ldots\ldots\ldots,}B_n$ =regression coefficients estimated from the data

(Fox, 2002)

CHAPTER 4: RESULTS

4.1 Introduction

This section focuses on the findings obtained in the study. A univariate examination of all the demographic and socio-economic characteristics, including the outcome variable, was conducted with the aim of observing the background profile of the respondents. The percentage distributions of all the variables are presented to show a detailed description of the demographic background of the respondents. In addition, the Kaplan-Meier graphs are also presented in order to observe the levels of age at first marriage of females as well as the levels of age at first marriage across all the other covariates. The percentage distributions of all the variables have been depicted on table 4.1 below.

4.2 Univariate analysis

The following section shows descriptive analyses of all the predictors and the outcome variable that were utilised in the study. The variables are shown using a series of frequency tables and discussions. A pie chart has also been presented that indicates the percentage distribution of age at first marriage in Mozambique. In addition, objective one was achieved by showing an estimate of the levels of age at first marriage among females as well as levels of age at first marriage across all the predictors through the use of Kaplan-Meier graphs.

Percentage distribution of age at first marriage in Mozambique

Figure 4.1 below illustrates the percentage distributions of age at first marriage in Mozambique. Out of a sample of 10 893 ever-married women that participated in this study, 61% of females entered a marital union before age 18 while 39% of females married beyond the age of 18 years.

Figure 4.1: Percentage distribution of age at first marriage among females aged 15-49 in Mozambique, 2011.

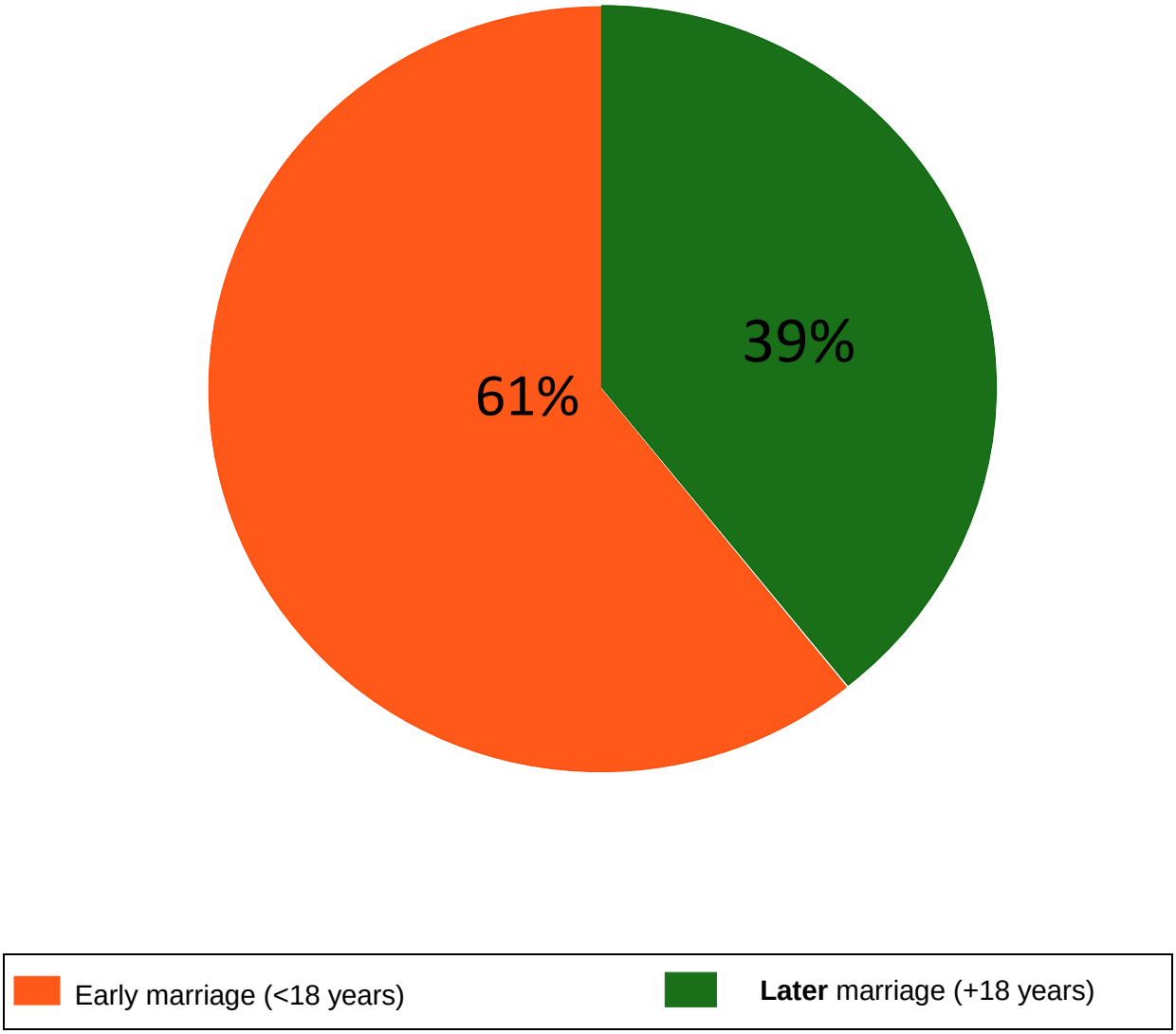


Table 4.1: Percentage distribution of respondents' by demographic and socioeconomic background characteristics, Mozambique 2011.

CHARACTERISTIC	FREQUENCY	PERCENTAGE (%) DISTRIBUTION
Dependent variable		
Age at first marriage		**Mean age of marriage = 18.4**
< 18 years	6 619	60.76
+ 18 years	4 274	39.24
Total	**10 893**	**100**
Independent variables		
DEMOGRAPHIC		
Region of residence		
Niassa	818	7.51
Cabo Delgado	954	8.76
Nampula	872	8.01
Zambezia	1 151	10.57
Tete	917	8.42
Manica	987	9.06
Sofala	1 245	11.43
Inhambane	888	8.15
Gaza	962	8.83
Maputo	2 099	19.27
Total	**10 893**	**100**
Current age of the respondent		
15-19	1 170	10.74
20-24	1 969	18.08
25-29	2 112	19.39
30-34	1 870	17.17
35-39	1 632	14.98
40-44	1 121	10.29
45-49	1 019	9.35
Total	**10 893**	**100**
Religious affiliation		
Protestant	505	4.64
Catholic	2 653	24.36
No religion	6 629	60.86
Other	1 106	10.15
Total	**10 893**	**100**
SOCIOECONOMIC		
Educational level		
No education	3 550	32.59
Primary	5 615	51.55
Secondary	1 573	14.44
Higher	155	1.42
Total	**10 893**	**100**

CHARACTERISTIC	FREQUENCY	PERCENTAGE (%) DISTRIBUTION
Wealth index		
Poorest	3 498	32.11
Middle	2 053	18.85
Richest	5 342	49.04
Total	**10 893**	**100**
Type of place of residence		
Urban	4 060	37.27
Rural	6 833	62.73
Total	**10 893**	**100**

Table 4.1 provides a detailed representation of the demographic and socioeconomic background characteristics of the respondents who took part in the research. More than half (61%) of the females in Mozambique married before their 18th birthday. Conversely, females who entered a marital union above age 18 made up the remaining 39% of the sample. In terms of the demographic variables, the percentage distributions for region of residence showed that majority of the respondents reside in Maputo (19%) followed by respondents who reside in Sofala (11%) and Zambezia (11%). Consequently, no percentage variations existed among females who reside in Manica, Gaza and Cabo Delgado as each of them constituted 9% of their respective populations. Furthermore, the lowest percentage distributions were found among females who reside in Tete, Inhambane, Niassa and Nampula as they all constituted 8% of their respective populations.

In terms of current age of the respondents, it is evident from Table 4.1 that respondents aged 25-29 made up majority of the population with a percentage of 19%, followed by 18% of respondents who are between the age cohorts 20-24. In addition, respondents in the age cohort 30-34 made up 17% of the population, followed by 15% of respondents in the 35-39 age cohorts, 11% in the 15-19 age cohort, 10% in the 40-44 age cohort and the lowest percentage of the sample of respondents (9%) was found in the 45-49 age cohort. Based on the fact that majority of the respondents were found within the 25-29 age cohorts, this

implies that the population of Mozambique is comprised of a moderately young population. Furthermore, a distinctive finding that emerged from the percentage distributions depicted on Table 4.1 demonstrated that over half of the population (61%) are not religiously affiliated. Additionally, approximately 24% of the respondents are Catholic, followed by 10% of the respondents who belong to other religious faiths and Protestants who comprised of a smaller percentage respectively (5%). A possible reason as to why majority of the respondents have no religious faith could possibly be a result of some people adhering to other African traditional religions or practicing certain traditional customs and norms solely in the absence of religious practices.

In terms of the socioeconomic variables, the percentage distributions of highest educational level showed that majority of the females in Mozambique have a primary education (52%), followed by 33% of females with no education. Subsequently, 14% of females are secondary school graduates and a mere 1% of females are college graduates. With reference to wealth status, the results obtained in the study showed that majority of the respondents fall within the richest wealth quintiles and make up almost half of the population (49%), followed by 32% of respondents who fall within the poorest wealth quintiles and the lowest percentage of 19% was comprised of those who fall within the middle wealth quintiles. An interesting distinctive feature that emerged out of these results is that almost half of the population fall within the richest wealth quintiles. This is an interesting finding considering the fact that literature suggested that more than 75% of the population in Mozambique survive on less than $2 daily (Population Reference Bureau, 2005). Additionally, Table 4.1 shows that approximately 63% of the respondents reside in rural settings, followed by 37% of respondents who reside in urban settings. These results thus confirm that Mozambique is largely rural.

Table 4.2: Percentage distribution of age at first marriage by demographic and socioeconomic background characteristics, Mozambique 2011

CHARACTERISTIC Independent variables	Number and Percentage (N and %)	Age at first marriage		Total
		Early marriage (<18)	Later marriage (+18)	
DEMOGRAPHIC				
Region of residence				
Niassa	N	532	286	818
	%	**65.04**	**34.96**	**100.00**
Cabo Delgado	N	660	294	954
	%	**69.18**	**30.82**	**100.00**
Nampula	N	557	315	872
	%	**63.88**	**36.12**	**100.00**
Zambezia	N	674	477	1 151
	%	**58.56**	**41.44**	**100.00**
Tete	N	603	314	917
	%	**65.76**	**34.24**	**100.00**
Manica	N	744	243	987
	%	**75.38**	**24.62**	**100.00**
Sofala	N	797	448	1 245
	%	**64.02**	**35.98**	**100.00**
Inhambane	N	521	367	888
	%	**58.67**	**41.33**	**100.00**
Gaza	N	567	395	962
	%	**58.94**	**41.06**	**100.00**
Maputo	N	964	1 135	2 099
	%	**45.93**	**54.07**	**100.00**
Total		6 619	4 274	10 893
		60.76	**39.24**	100.00
				Pearsonchi2(9)=340.8590
				P-value = 0.000

CHARACTERISTIC Independent variables	Number and Percentage (N and %)	Age at first marriage Early marriage (<18)	Later marriage (+18)	Total
DEMOGRAPHIC **Current age of the respondent**				
15-19	N	1 148	22	1 170
	%	**98.12**	**1.88**	**100.00**
20-24	N	1 361	608	1 969
	%	**69.12**	**30.88**	**100.00**
25-29	N	1 275	837	2 112
	%	**60.37**	**39.63**	**100.00**
30-34	N	951	919	1 870
	%	**50.86**	**491.4**	**100.00**
35-39	N	809	823	1 632
	%	**49.57**	**50.43**	**100.00**
40-44	N	567	554	1 121
	%	**50.58**	**49.42**	**100.00**
45-49	N	508	51	1 019
	%	**49.85**	**50.15**	**100.00**
Total		6 619	4 274	10 893
		60.76	**39.24**	100.00
				Pearson chi2(6)=1.0e+03 P-value = 0.000
Religious affiliation				
Protestant	N	274	231	505
	%	**54.26**	**45.74**	**100.00**
Catholic	N	1 545	1 108	2 653
	%	**58.24**	**41.76**	**100.00**
Other	N	4 077	2 552	6 629
	%	**61.50**	**38.50**	**100.00**
No religion	N	723	383	1 106
	%	**65.37**	**34.63**	**100.00**
Total		6 619	4 274	10 893
		60.76	**39.24**	100.00
				Pearson chi2(3)=27.4402 P-value = 0.000

CHARACTERISTIC Independent variables	Number and Percentage (N and %)	Age at first marriage Early marriage (<18)	 Later marriage (+18)	 Total
SOCIOECONOMIC **Educational level**				
No education	N	2 122	1 428	3 550
	%	**59.77**	**40.23**	**100.00**
Primary	N	3 701	1 914	5 615
	%	**65.91**	**34.09**	**100.00**
Secondary	N	781	792	1 573
	%	**49.65**	**50.35**	**100.00**
Higher	N	15	140	155
	%	**9.68**	**90.32**	**100.00**
Total		6 6`19	4 274	10 893
		60.76	39.24	100.00
				Pearsonchi2(3)=315.0555 P-value=0.000
Wealth index				
Poorest	N	**2 242**	**1 256**	3 498
	%	64.09	35.91	**100.00**
Middle	N	**1 378**	**675**	2 053
	%	67.12	32.88	**100.00**
Richest	N	**2 999**	**2 343**	5 342
	%	56.14	43.86	**100.00**
Total		6 619	4 274	10 893
		60.76	39.24	100.00
				Pearson chi2(2)=98.9765 P-value=0.000
Type of place of residence				
Urban	N	2 170	1 890	4 060
	%	**53.45**	**46.55**	**100.00**
Rural	N	4 449	2 384	6 833
	%	**65.11**	**34.89**	**100.00**
Total		6 619	4 274	10 893
		60.76	39.24	100.00
				Pearsonchi2(1)=145.2848 P-value=0.000

Table 4.2 shows the percentage distributions of age at first marriage by demographic and socioeconomic characteristics. With regards to region of residence, Table 4.2 shows that 75% of females who reside in Manica and 69% of females residing in Cabo Delgado provinces of Mozambique exhibited higher levels of early marriage compared to other provinces as they constituted larger percentage distributions of the population respectively. In addition, the results revealed slight variations in early age of marriage among females residing in Tete (66%) and Niassa (65%). Additionally, females residing in Sofala (64%) and Nampula (64%) had the same percentage distribution as they both made up the same percentage of females who had entered an early marriage. Furthermore, the results revealed that females residing in Gaza (60%), Inhambane (60%) and Zambezia (60%) also constituted the same percentage distributions of those who entered an early marriage. In contrast to these findings, females who reside in Maputo exhibited low levels of early marriage compared to all the regions as they constituted 46% of the population.

Conversely, later marriage is higher among females who reside in Maputo (54%) followed by females residing in Zambezia (41%), Inhambane (41%) and Gaza (41%). In addition, females residing in Nampula (36%) and Sofala (36%) also had the same percentage distribution of females who married at a later stage. In addition, slight percentage variations were found among females residing in Niassa (35%) and Tete (34%) followed by 31% of females residing in Cabo Delgado. The lowest percentage of females who have entered a marital union at a later age was found among females who reside in Manica as they constituted only 23% of the population.

With regards to current age of the female, overall, an astounding 98% of females between the ages of 15-19 have entered a marital union at an early age followed by 69% of females

aged 20-24. These percentage distributions were pivotal to the study as they showed that the practice of early marriage is highly evident in Mozambique based on its prevalence particularly among those aged 15-19. In addition to these findings, 60% of females aged 25-29 have entered a marital union at an early age. In addition, the results showed the same percentage distributions in early age of marriage among females aged 30-34 and 40-44 as it was demonstrated that 51% of 30-34 year old females and 51% of 40-44 year old females entered a marital union at an early age, followed by the lowest percentage of 50% for both females aged 35-39 and 45-49 respectively. Contrary to these findings, later age of marriage is evidently higher among females aged 35-39 and 45-49. This is mainly because both these age cohorts still constituted the same percentage distribution of 50% of the population, followed by females aged 30-34 and 40-44 who both constituted 49% of the population of females who married later in life, respectively. Additionally, 40% of females aged 25-29 married later on in life followed by 31% of females aged 20-24. The lowest percentage of females who married at a later age (2%) was found among females aged 15-19. These results are thus consistent with literature which provided evidence about the issue of child marriage occurring in Mozambique.

Furthermore, Table 4.2 showed that a vast majority of females who do not follow any religious denominations (65%) entered a marital union at an early age, followed by 62% of females who follow other religious denominations, 58% of females who are Roman Catholic and the lowest percentage of females who married at an early age was found among 54% of females who are Protestant. Conversely, a higher percentage of females who married at a later age was found among females who are Protestant (46%) followed by 42% of Catholics and 39% of females who follow other religious denominations. The lowest percentage of

females who married at a later stage was found among females who do not follow any religious denomination and they constituted 35% of the population.

With regards to educational level, the largest percentage of females in Mozambique with primary (66%) or no education (60%) have entered a marital union at an early age (below age 18) followed by 50% of females who are secondary school graduates in relation to only 10% of women who are college graduates. This thus indicated that females with a higher education tend to enter a marital union at a later age. Contrary to these findings, results obtained on late marriage indicated marked differences as they showed that a startling 90% of females with a higher education enter a marital union at a later age. The percentage of females with a secondary education was similar in both levels of age at first marriage as 50% of females had entered a late marriage. In addition, 40% of females with no education had entered a marital union at a later age followed by 34% of females with a primary education. The results obtained were unanticipated as it would be expected that females with a primary education marry at a slightly later age in relation to females with no educational qualifications because of their advanced level of schooling.

With regards to wealth index, the results showed that early marriage is common among those who fall within the middle (67%) and poorest (64%) wealth quintiles, with slight percentage differences. Furthermore, early marriage is lowest among females who fall within the richest wealth quintiles and they constituted 56% of the population. Conversely, results showed that later marriage is common among females who fall within the richest wealth quintiles as they constitute 44% of the population, followed by 36% of females who fall within the poorest wealth quintiles. Once again, an interesting finding that emerged out of these results is that the lowest percentage of females who entered a marital union at a

later age is found among females who fall within the middle wealth quintiles as they constitute 34% of the population. With reference to residence, the results show that early marriage is higher in rural settings as opposed to urban settings based on the fact that the percentage of females residing in rural areas and who have entered a marital union at an early age is 65% and the lowest percentage is 53% for females living in urban settings. Conversely, a greater percentage of later marriage was observed among females who reside in urban areas as they constituted 47% of the population compared to 35% of females who reside in rural areas.

Table 4.3: Unweighted rates of early marriage by demographic and socioeconomic characteristics per 1000 respondents in Mozambique, 2011

Characteristics	Number of respondents	Number of respondents who entered early marriage	Rate per 1 000 respondents
Region of residence			
Niassa	818	532	65.04
Cabo Delgado	954	660	69.18
Nampula	872	557	63.88
Zambezia	1 151	674	58.56
Tete	917	603	65.76
Manica	987	744	**75.38**
Sofala	1 245	797	64.02
Inhambane	888	521	58.67
Gaza	962	567	58.94
Maputo	2 099	964	45.93
Current age of the respondent			
15-19	1 170	1 148	**98.12**
20-24	1 969	1 361	69.12
25-29	2 112	1 275	60.37
30-34	1 870	951	50.86
35-39	1 632	809	49.57
40-44	1 121	567	50.58
45-49	1 019	508	49.85
Religious affiliation			
Protestant	505	274	54.26
Catholic	2 653	1 545	58.24
Other	6 629	4 077	61.50
No religion	1 106	723	**65.37**
Educational level			
No education	3 550	2 122	59.77
Primary	5 615	3 701	**65.91**
Secondary	1 573	781	49.65
Higher	155	15	9.68
Wealth index			
Poorest	3 498	2 242	64.09
Middle	2 053	1 378	**67.12**
Richest	5 342	2 999	56.14
Type of place of residence			
Urban	4 060	2 170	53.45
Rural	6 833	4 449	**65.11**

The results portrayed in Table 4.3 indicated unweighted rates of early marriage across all the demographic and socioeconomic characteristics per 1000 respondents in Mozambique. The results shown in Table 4.3 indicated that unweighted rates of early marriage are highest among females who reside in Manica as they constituted almost 80 early marriages per 1000 respondents in Mozambique. Additionally, unweighted rates of early marriage are highest in Cabo Delgado, Tete, Niassa, Sofala and Nampula as they each constituted over 60 early marriages per 1000 respondents in Mozambique. These rates are followed by females who reside in Inhambane, Gaza and Zambezia as they each constituted nearly 60 early marriages per 1000 respondents. Overall, rates of early marriage are lowest for females residing in Maputo (50 early marriages per 1000 respondents).

In relation to the respondent's current age, females between the age groups 15-19 exhibited the highest rates of early marriage (98 early marriages per 1000 respondents) followed by females between the age groups 20-24 and 25-29 who exhibited rates of over 60 early marriages (69 early marriages per 1000 females aged 20-24 and 60 early marriages per 1000 females aged 25-29). Furthermore, the rates of early marriage were similar for females between the age groups 30-34 and 40-44 as they exhibited rates of early marriage above 50 per 1000 respondents in Mozambique (51 early marriages per 1000 respondents respectively) followed by females in the age cohorts 35-39 and 45-49 who also exhibited the same rates of early marriage (50 early marriages per 1000 respondents). In terms of religious affiliation, the results portrayed in Table 4.3 showed that rates of early marriage are highest for females who are not religiously affiliated (65 early marriages per 1000 respondents), followed by females who follow other religious denominations (62 early marriages per 1000 respondents). Contrary to these findings, the results also showed fewer differences in the rates of early marriage for females who are Catholic (58 early marriages

per 1000 females) and Protestant (54 early marriages per 1000 females) as they exhibited slightly lower rates in relation to other religious denominations.

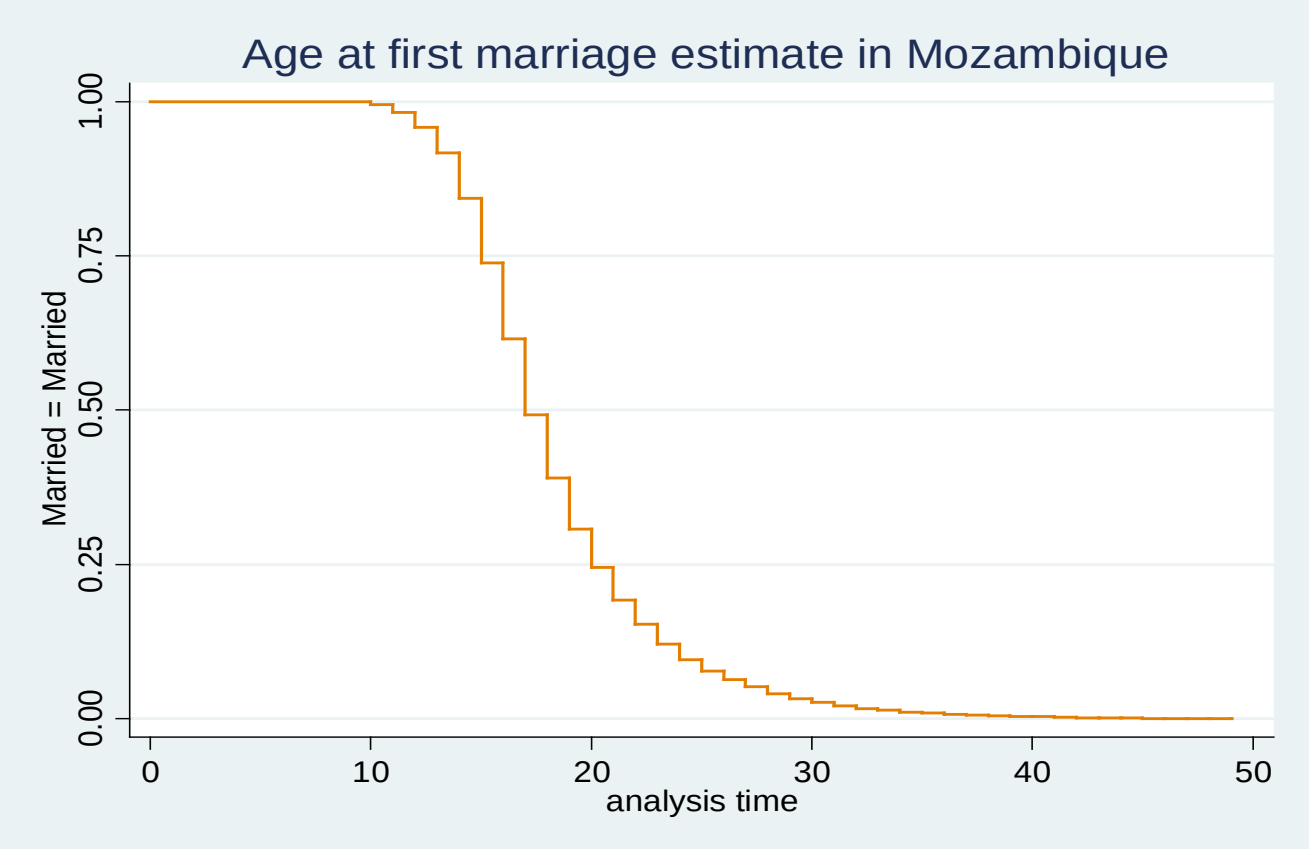
Furthermore, the results showed that females with a primary education have the highest rates of early marriage (66 early marriages per 1000 respondents). This rate was followed by females with no education and their rate constitutes of 60 early marriages per 1000 respondents, followed by females with secondary education who constituted 50 early marriages per thousand respondents. In contrast, the results showed that females with a tertiary education have the lowest rates of early marriage compared to females with other educational qualifications (10 early marriages per 1000 of the respondents, respectively).

With regards to wealth index, the results on Table 4.3 showed that rates of early marriage are highest among females who fall within the middle wealth quintiles (67 early marriages per 1000 respondents). This figure is followed by 64 early marriages per 1000 respondents that occur among females who fall within the poorest wealth quintiles. Contrary to these findings, the results showed that the proportion of females who fall within the richest wealth quintiles have the lowest rates of early marriage in relation to females who fall in other wealth quintiles (56 early marriages per 1000 respondents). The results obtained suggested that as educational attainment and wealth status increases, the lower the levels of early marriage. In considering residence, the results indicated a higher rate of early marriage amongst women who live in rural settings compared to females who reside in urban settings, as they constituted 65 early marriages per 1000 respondents, compared to 53 early marriages per 1000 respondents.

4.3 Kaplan Meier estimates of levels of age at first marriage among females in Mozambique across all demographic and socioeconomic variables

Another part of objective one was to examine the levels of age at first marriage among females as well as the levels of age at first marriage across all the demographic and socioeconomic variables. The Kaplan-Meier estimates shown in the graphs below depict the levels/patterns of age at first marriage for the uncensored cases (females who have been married) and they exclude the censored cases (women who are not married and whose endpoint of interest which is marriage, has not been observed for them).

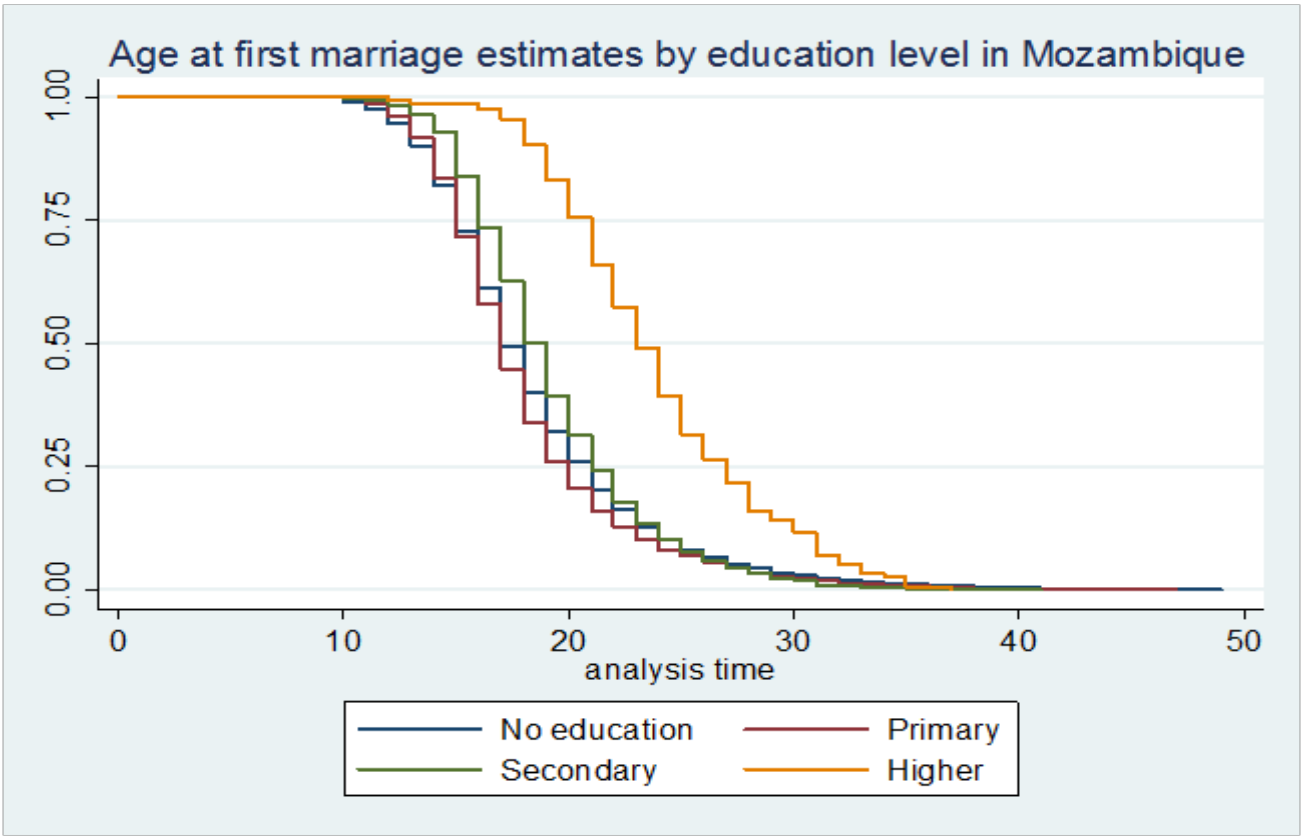
Figure 4.2: Estimation of the levels of age at first marriage among females in Mozambique



The Kaplan-Meier curve presented in Figure 4.2 which shows an estimate of age at first marriage indicated remarkable differences with regards to the risk of entering a marital union at an early age. The results demonstrated that early age of first marriage was particularly highest among 50% of females who were below the age of 18. Furthermore, early age of marriage starts to decrease with an increase in the female's age and this is depicted in the graph, particularly after the age of 20 onwards. A possible reason for the occurrence shown could be ascribed to the fact that the incidence of early marriage is considerably high in Mozambique.

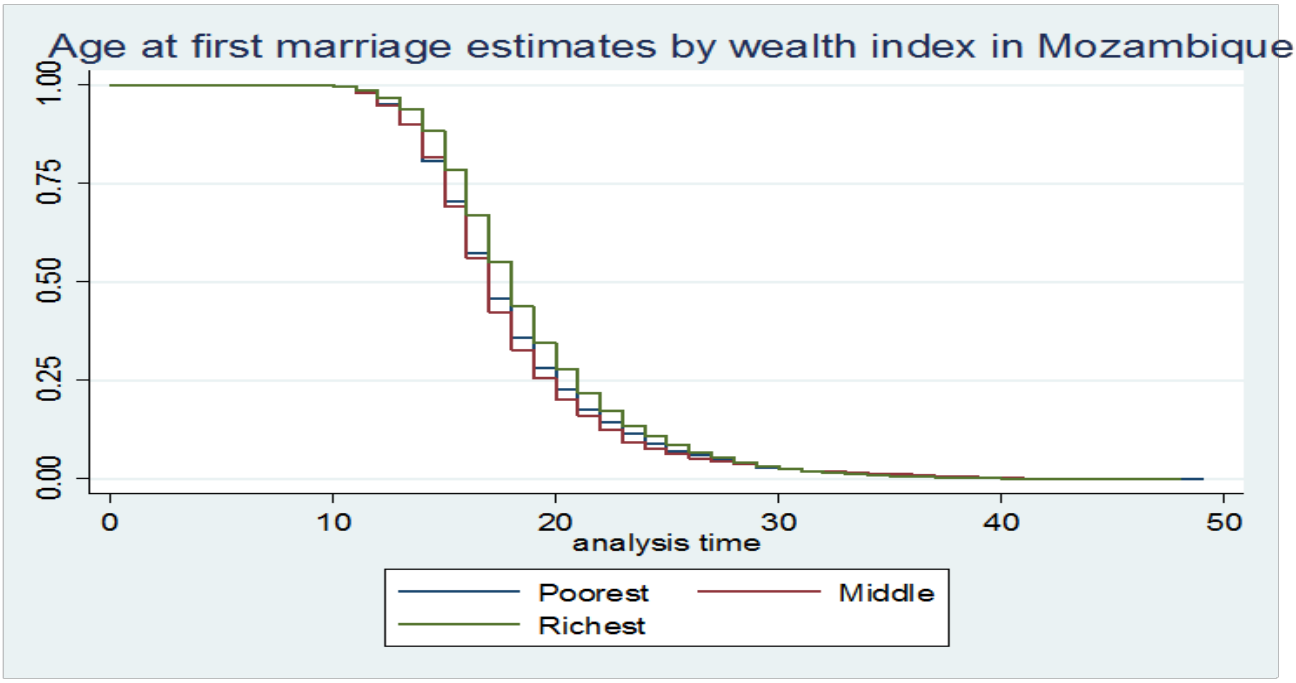
Estimate of age at first marriage by selected demographic and socio-economic variables

Figure 4.3: Kaplan Meier's age at first marriage estimate by educational level in Mozambique



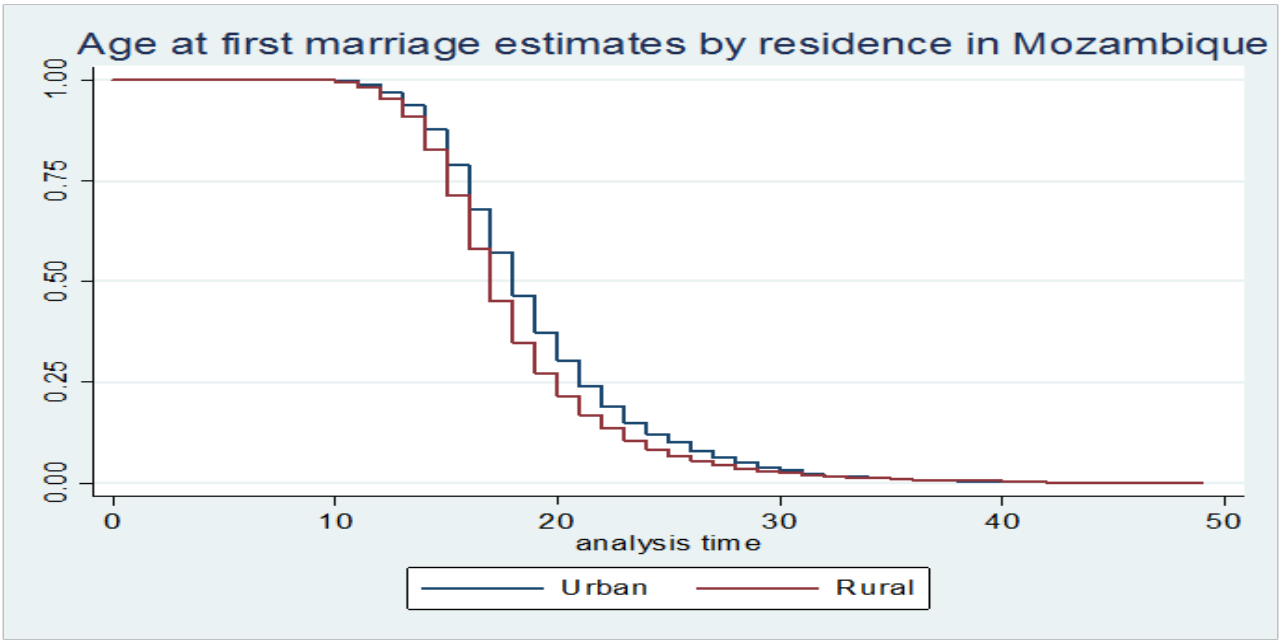
The Kaplan-Meier graphs presented in Figures 4.3 to figure 4.8 show estimates of age at first marriage by selected demographic and socioeconomic variables. Figure 4.3 indicated the Kaplan Meier's age at first marriage estimate by educational level in Mozambique. With regards to educational level, the results depicted in Figure 4.3 revealed significant differences with regards to the risk of entering a marital union at an early age if one reaches a certain age. The survival curves indicated that early age of marriage is highest among females with primary or no education, slightly followed by those with a secondary education. This is shown by how the curves converge which thus suggests that the difference between these two categories decreases with time. In contrast, later age of marriage is common among females with a higher education and this has been shown in Figure 4.3 where a large percentage of females over the age of 20, enter a marital union at a later age, as shown by how the survival curve diverges from the other curves.

Figure 4.4: Kaplan Meier's age at first marriage estimate by wealth status in Mozambique



Additionally, Figure 4.4 indicated the Kaplan Meier's age at first marriage estimate by wealth status. With regards to wealth status, the survival curves showed that females in the poorest and middle wealth quintiles tend to marry at younger ages. This is evident by the two respective curves representing the two wealth quintiles which show that over 50% of females aged over 10-15 enter a marital union at a later age. In contrast, females who fall within the richest wealth quintiles appear to enter a marital union at a later age. This is shown by the survival curve which is slightly further apart from the two survival curves representing the poorest and middle wealth quintiles.

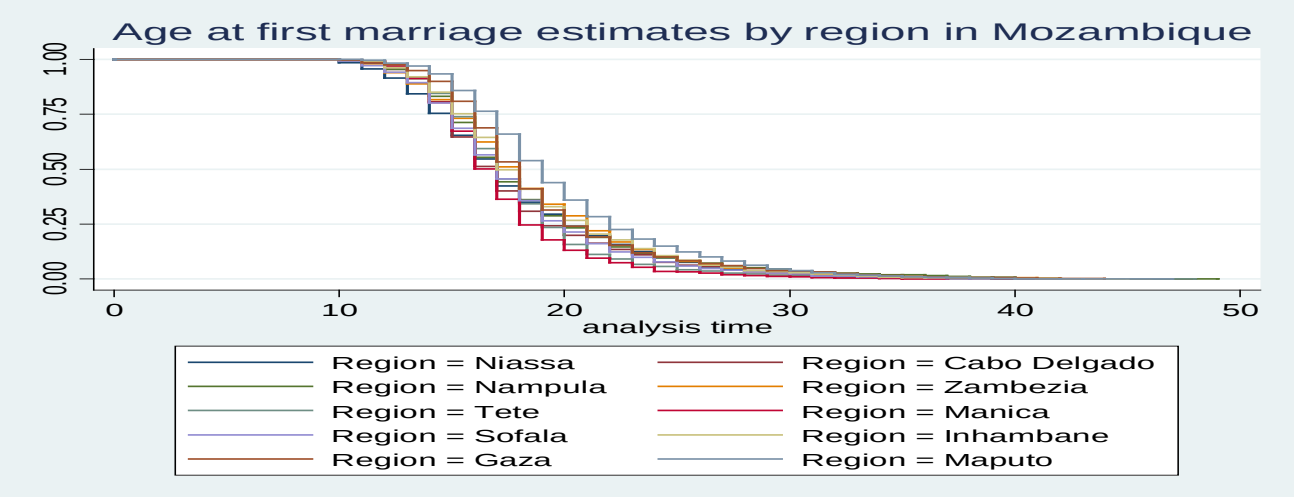
Figure 4.5: Kaplan Meier's age at first marriage estimate by type of place of residence in Mozambique



With reference to Figure 4.5 which shows the Kaplan Meier's age at first marriage estimate by type of place of residence, early age of marriage is slightly greater for females residing in rural regions compared to females residing in urban regions. This is mainly because the

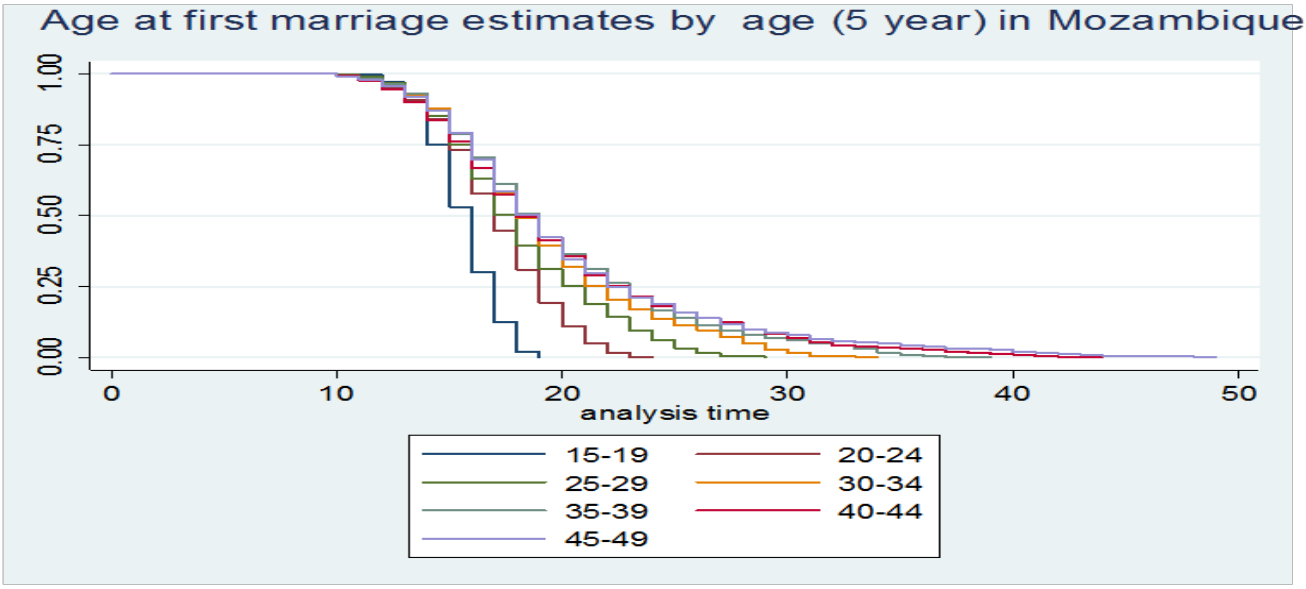
survival curves indicated that the endpoint of interest (early marriage) occurs much earlier for those who reside in rural regions.

Figure 4.6: Kaplan Meier's age at first marriage estimate by region of residence in Mozambique



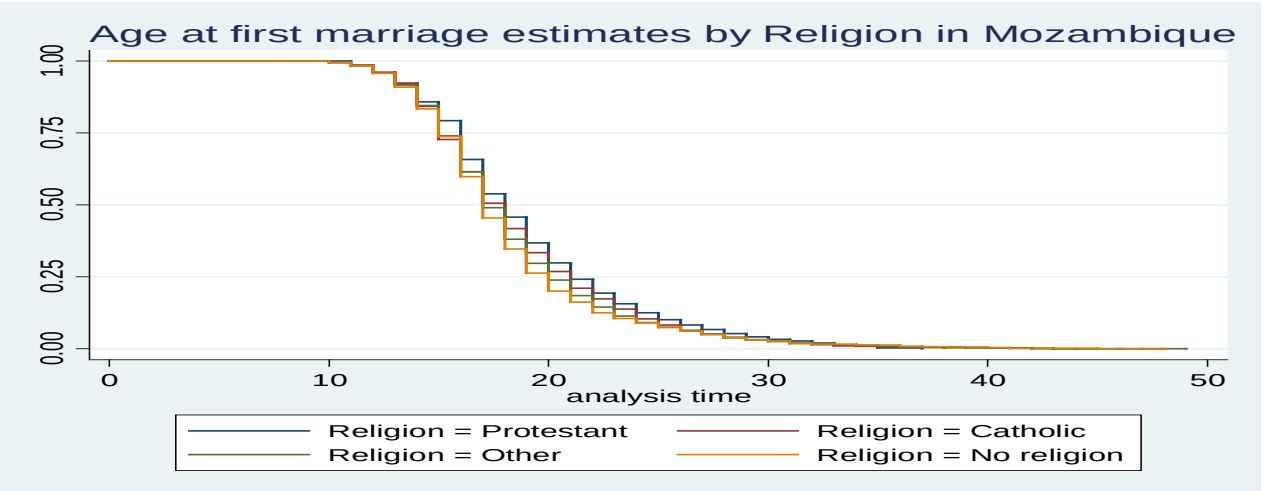
In terms of region of residence, Figure 4.6 shows a fairly similar pattern in the age of first marriage across some of the regions although the results shown in each of those groups were somehow proportional. Additionally, early age of marriage is particularly highest among females who reside in Manica as the survival curve representing Manica indicated the occurrence of the outcome event at a much earlier stage compared to all the other regions. Contrary to this finding, females who reside in Maputo have a slightly higher age of first marriage compared to the other areas. The outcome event occurs at a much later age compared to the other regions, as shown by the survival curve which is slightly diverging from the other survival curves.

Figure 4.7: Kaplan Meier's age at first marriage estimate by current age of the female in Mozambique



With reference to Figure 4.7, the Kaplan Meier's age at first marriage estimate by current age, shows that early age of marriage is prevalent among over 50% of females in the 15-19 age cohorts followed by females who are in the 20-24 age cohorts. Conversely, early age of marriage starts to decline among the age cohorts 30-34 up to age 45-49.

Figure 4.8: Kaplan Meier's age at first marriage estimate by religious affiliation of the female in Mozambique



Furthermore, the Kaplan Meier's age at first marriage estimate by religious affiliation also produced similar results as majority of females below the age of 18 who do not follow any religious denomination, enter a marital union at an early age. In addition, early age of marriage starts to decline from age 20 onwards across all the other religious denominations.

Inferential results

4.4 Cox Proportional Hazard Bivariate and Multivariate Regression Models

The second objective of the study was to identify the demographic and socioeconomic characteristics that influence age at first marriage among females in Mozambique. This section provides the inferential results obtained from the Cox Proportional Hazard regression model at a bivariate and multivariate level. The unadjusted (bivariate) and adjusted (multivariate) measures assisted in assessing the relative exposure to the outcome of interest which is early age of marriage. Table 4.4 below depicted the unadjusted (bivariate) hazard ratios and p-values of each independent variable against age at first marriage.

4.4.1 Unadjusted Cox Proportional hazard models

Table 4.4: Unadjusted Hazard ratios between age at first marriage and demographic and socioeconomic characteristics in Mozambique

Independent variables	Unadjusted Hazard ratios (P-value)	[95% Confidence Intervals (CI)]
Demographic		
Region		
Niassa	RC	
Cabo Delgado	1.05 (0.282)	0.96 - 1.16
Nampula	0.93 (0.115)	0.84 - 1.02
Zambezia	0.88* (0.006)	0.81 - 0.96
Tete	1.06 (0.256)	0.96 - 1.16
Manica	1.24* (0.000)	1.13 - 1.36
Sofala	1.00 (0.936)	0.92 - 1.10
Inhambane	0.87* (0.005)	0.79 - 0.96
Gaza	0.85* (0.001)	0.78 - 0.94
Maputo	0.71* (0.000)	0.66 - 0.77
Current age of the respondent		
15-19	RC	
20-24	0.55* (0.000)	0.51 - 0.59
25-29	0.42* (0.000)	0.39 - 0.45
30-34	0.33* (0.000)	0.31 - 0.36
35-39	0.29* (0.000)	0.27 - 0.31
40-44	0.28* (0.000)	0.26 - 0.31
45-49	0.27* (0.000)	0.24 - 0.29
Religious affiliation		
Protestant	RC	
Catholic	1.08 (0.112)	0.98 - 1.19
Other	1.12* (0.010)	1.02 - 1.22
No religion	1.18* (0.003)	1.06 - 1.31
SOCIOECONOMIC		
Educational level		
No education	RC	
Primary	1.10* (0.000)	1.06 - 1.15
Secondary	0.89* (0.000)	0.84 - 0.95
Higher	0.49* (0.000)	0.42 - 0.57
Wealth index		
Poorest	RC	
Middle	1.05 (0.079)	0.99 - 1.11
Richest	0.88* (0.000)	0.84 - 0.91
Type of place of residence		
Urban	RC	
Rural	1.21* (0.000)	1.16 - 1.26

RC = Reference Category, $p < 0.05$ = Category significance

Table 4.4 above shows the unadjusted hazard ratios of exposure to early marriage for each demographic and socioeconomic variable independently. Furthermore, the results depicted in Table 4.4 indicated that all the independent predictors have a substantial influence on age at first marriage as some of the categories had p-values that are greater than 0.05. This as a result, shows that the unadjusted models in their entirety are statistically significant. Despite the fact that the relationship was not significant for the regions Cabo Delgado, Nampula, Tete and Sofala, the unadjusted hazard ratios revealed that females who reside in Zambezia have a 12% lower risk of exposure to early marriage in relation to females who reside in Niassa. This is followed by females who reside in Inhambane who have a 13% lower hazard of exposure to early marriage. In addition, the hazard ratio of exposure to early marriage is 15% lower for females who reside in Gaza compared to females who reside in Niassa. Females who reside in Maputo have the greatest reduced risk of exposure to early marriage compared to females who reside in Niassa as they exhibited a significant 29% lower risk. Contrary to all these findings, the results revealed that females who reside in Manica exhibited a 24% higher risk of exposure to early marriage in relation to females who reside in Niassa which thus suggests that early marriage levels are high in Manica.

With reference to the respondent's age in 5 year intervals, all the age groups showed a substantial influence on age at first marriage. The unadjusted hazard ratios in Table 4.4 showed that females between the age groups 20-24 have a significant 45% lower risk of exposure to early marriage compared to younger females within the age groups 15-19. Additionally, females between the age groups 25-29 have a meaningfully 58% lower hazard of exposure to early marriage in relation to females aged 15-19 years. Furthermore, the hazard ratio of exposure to early marriage is 67% lower for females in the age cohorts 30-34 compared to females between the age groups 15-19, while females between the age groups

35-39 exhibited a 71% lower risk of exposure to early marriage in relation to females aged 15-19 years. In addition, the results showed that females between the ages 40-44 exhibited a 72% lower risk of exposure to early marriage in relation to females between the ages 15-19. The highest reduced risk of exposure to early marriage has been found among females in the age groups 45-49 as the unadjusted hazard ratios revealed that they exhibited a significant 73% lower risk of exposure to early marriage compared to females between the age groups 15-19.

The results further indicated a significant relationship between religious affiliation and age at first marriage. Although the results indicated no significant influence of Catholicism on age at first marriage because of the insignificant p-value, the results showed that females who follow other religious denominations exhibit a 12% increased hazard of exposure to early marriage in relation to females who are Protestant. Additionally, females who are not religiously affiliated have an 18% higher risk of exposure to early marriage compared to females who are Protestant.

In addition, all the levels of education showed a significant influence on age at first marriage. The unadjusted hazard ratios for primary education showed that females with a primary education have a significant 10% higher risk of exposure to early marriage compared to females with no education. This is an astounding finding considering the fact that literature offers a counter-argument suggesting that females with no education have an increased hazard of exposure to early marriage in relation to females who are primary school graduates. Conversely, the findings showed that females who are secondary school graduates have an 11% reduced hazard of exposure to early marriage in relation to females with no educational qualifications. The greatest reduced risk of exposure to early marriage

was found among females with a tertiary education as the results showed that they have a 51% reduced hazard of exposure to early marriage in relation to females with no educational qualification.

Furthermore, the results also revealed a significant influence of wealth index on age at first marriage. Despite the fact that the relationship is not significant for the middle wealth quintile, the unadjusted hazard ratios show that females who fall within the richest wealth quintiles have a 12% lower risk of exposure to early marriage compared to females who fall in the poorest wealth quintile. In relation to type of place of residence, the unadjusted hazard ratios revealed that females who reside in rural settings have a 21% increased hazard of exposure to early marriage in relation to females who reside in urban settings.

4.4.2 Multivariate adjusted Cox Proportional hazard model

Table 4.5 below shows the adjusted multivariate findings of all the demographic and socioeconomic variables and the results showed whether the reported significance of the unadjusted hazard ratios from the bivariate models remained the same for the adjusted hazard ratios. The results obtained in Table 4.5 showed that the respondent's current age, region of residence and educational level are significant predictors of age at first marriage in Mozambique. Table 4.5 further indicated that the respondent's current age, educational level and region still have a substantial influence on age at first marriage at the multivariate level, even after holding other covariates in the model constant. The multivariate results specified that region has a substantial influence on age of first marriage of a female and significant results are found in Cabo Delgado, Manica, Gaza and Maputo. The results indicated a significant decrease in the hazard ratios of exposure to early marriage for

females residing in Maputo and Gaza and a significant increase in the hazard ratios of exposure to early marriage for females residing in Manica.

0Despite these differences in the hazard ratios, females who reside in Maputo still maintained the greatest reduced risk of exposure to early marriage as they exhibited a 20% lower risk of exposure to early marriage compared to females who reside in Niassa. In addition, females who reside in Gaza exhibited a 14% lower risk of exposure to early marriage compared to females who reside in Niassa. Contrary to these findings, the multivariate results in Table 4.5 show that the highest risk of exposure to early marriage is found among females who reside in Manica (19%) and Cabo Delgado (11% respectively) in relation to females who reside in Niassa. The results obtained for region of residence were thus in accordance with previous works which proposed that a higher rate of early marriage is found in Mozambique's central and northern regions compared to the southern regions.

In terms of the respondent's age, females who are between the age groups 45-49 continued to exhibit the lowest risk of exposure to early marriage (73%) followed by females between age groups 40-44 (71%) and females aged 35-39 (70%) respectively, compared to females between age groups 15-19. In addition, a slight decrease in the adjusted hazard proportions for females aged 20-24, 25-29 and 30-34 could be observed as the adjusted results showed that females between age groups 20-24 have a 43% lower risk of exposure to early marriage, followed by females in the age groups 25-29 who have a 57% lower risk and females aged 30-34 who have a 64% lower risk of exposure to early marriage in relation to females in the 15-19 year age groups. The adjusted results showed that the hazard ratios of exposure to early marriage were somehow still maintained for each age group.

Contrary to these findings, the results obtained in the adjusted multivariate model after adjusting for the effect of other covariates surprisingly indicated that religion is not statistically significant. This thus implies that religious affiliation has no influence on age at first marriage among females in Mozambique. In addition to these findings, educational level maintained its significant influence on age at first marriage even after adding other covariates in the model. The adjusted multivariate results showed a significant increase in the hazard ratios of exposure to early marriage for females with a primary education and a decrease in the hazard ratios of exposure to early marriage for females with a secondary education.

In addition, the results showed that females with a primary education have a 5% increased hazard of exposure to early marriage in relation to females without an educational qualification. Conversely, women who are secondary school graduates have a 21% reduced hazard ratio of exposure to early marriage in relation to females with no educational qualification and females with a tertiary education have the greatest reduced risk of exposure to early marriage (46% respectively) compared to females with no education. As expected, these results showed a negative correlation between educational level and age at first marriage as they indicated that the higher the level of education, the lower the hazard ratio of exposure to early marriage.

To sum up the results, a distinctive finding that emerged after adjusting for all the independent variables showed that residence and wealth index have no significant association with age at first marriage. It was however, interesting to note how wealth index does not influence age at first marriage as it would be expected that the financial standing

of a family is a strong predictor of age at first marriage and that residence is closely linked to one's wealth status.

Table 4.5: Adjusted Hazard ratios between age at first marriage and demographic and socioeconomic factors in Mozambique

Independent variables	Adjusted Hazard ratios (P-value)	[95% Confidence Intervals (CI)]
Demographic		
Region of residence		
Niassa	RC	
Cabo Delgado	1.11* (0.035)	1.01 - 1.22
Nampula	0.91 (0.066)	0.83 - 1.01
Zambezia	0.93 (0.105)	0.84 -1.02
Tete	1.07 (0.167)	0.97 -1.18
Manica	1.19* (0.000)	1.08 -1.31
Sofala	1.04 (0.371)	0.95 - 1.14
Inhambane	0.92 (0.098)	0.83 - 1.02
Gaza	0.86* (0.003)	0.78 - 0.95
Maputo	0.80* (0.000)	0.73 - 0.87
Current age of the respondent		
15-19	RC	
20-24	0.57* (0.000)	0.53 - 0.62
25-29	0.43* (0.000)	0.40 - 0.47
30-34	0.34* (0.000)	0.32 - 0.37
35-39	0.30* (0.000)	0.27 - 0.32
40-44	0.29* (0.000)	0.26 - 0.31
45-49	0.27* (0.000)	0.24 - 0.29
Religious affiliation		
Protestant	RC	
Catholic	1.01 (0.831)	0.92 - 1.11
Other	1.01 (0.887)	0.92 - 1.10
No religion	0.99 (0.894)	0.89 - 1.11
SOCIOECONOMIC		
Educational level		
No education	RC	
Primary	1.05* (0.028)	1.01 - 1.10
Secondary	0.79* (0.000)	0.73 - 0.85
Higher	0.54* (0.000)	0.45 - 0.64
Wealth index		
Poorest	RC	
Middle	1.03 (0.275)	0.97 - 1.09
Richest	1.06 (0.070)	0.99 - 1.13
Type of place of residence		
Urban	RC	
Rural	1.03 (0.317)	0.97 - 1.08

RC = Reference Category, p< 0.05 = Category significance

CHAPTER 5: DISCUSSION

5.1. Introduction

The main objective of this chapter was to provide a discussion and interpretation of the results obtained in the study by assimilating the findings with the existing literature that has been utilised in this study. This research study was conducted to explore whether demographic and socioeconomic characteristics such as region of residence, current age of the respondent, religious affiliation, educational level, wealth index and type of place of residence have an influence on age at first marriage. This paper has addressed two specific objectives. The first objective of the study was to examine the levels of age at first marriage among females in Mozambique. This objective was achieved through the use of Kaplan-Meier survival estimate graphs which were used to provide a graphical depiction of the levels of age at first marriage across all the demographic and socioeconomic variables. Subsequently, the second objective of the study was to identify the demographic and socioeconomic characteristics that have an influence on age at first marriage among females in Mozambique. This objective was achieved by employing unadjusted (bivariate) and adjusted (multivariate) Cox regression models. A thorough discussion of the findings obtained in this study that encompass both objective one and objective two are presented below and they are addressed with particular reference to each demographic and socioeconomic characteristic.

5.2 Discussion on levels of age at first marriage in Sub-Saharan Africa

Generally, the findings obtained in this study indicated that 61% of females residing in Mozambique married before their 18th birthday. This result is congruent with literature that has been conducted in nine other developing nations which were found to have high early

marriage rates namely Niger, Chad, Bangladesh, Guinea, Mali, Malawi, Madagascar, Sierra Leone and Burkina Faso (Loaiza Sr & Wong, 2012). One study suggested that high rates of early marriage in these countries are perpetuated by gender disparities, cultural laws that prohibit premarital sex among young females, poverty, religious practices and patriarchal tendencies that involve controlling the sexuality of females (Walker, 2012). Furthermore, the practice of early marriage in Burkina Faso, Guinea, Chad, Mali, Niger and Sierra Leone (which are West African countries) is mainly perpetuated by a policy disengagement that exists between educationalists and civil society actors (Walker, 2013). This is the main issue that is occurring in these countries despite the laws that have been implemented concerning the minimum legal age of marriage (Walker, 2013).

As a result, this has impeded the progress of educationalists and civil society actors in working to eradicate the practice of early marriage through educational strategies that foster female education (Walker, 2013). For instance, key informants and policymakers in West Africa have argued that early marriage is a concealed and accepted practice that is considered to be a natural cultural practice within society and within government organisations (Walker, 2013). Additionally, factors perpetuating early marriage in Mali are the laws that have lowered the minimum age of first marriage which allow young females to enter a marital union by the age of 15, with the approval of their families (Brown, 2012). Furthermore, in Niger, early marriage is perpetuated by the strong need to follow tradition, increase cohesion between societies within Niger as well as to protect young females from being exposed to premarital pregnancy (UNICEF, 2001).

5.3 Discussion on demographic characteristics associated with age at first marriage in Mozambique.

In consideration of region of residence, the bivariate and multivariate results portrayed on Tables 4.4 and 4.5 confirmed that region has a major influence on age at first marriage among females in Mozambique even after adjusting for the influence of other covariates. A previous study suggested that province of residence is similarly effective in explaining age at first marriage based on the fact that diverse provinces may have diverse levels of economic growth (Palamuleni, 2011). In addition, different provinces may be traditionally heterogeneous which may thus lead to changes in the timing of marriage (Palamuleni, 2011). This is mostly true in the context of Mozambique as a study that focused on ethnicity and marriage patterns in Mozambique postulated that different areas in Mozambique are culturally heterogeneous and that marriage patterns vary possibly due to both socioeconomic and cultural dynamics (Arnaldo, 2004).

Furthermore, the results obtained in this study demonstrated that females who reside in the Gaza and Maputo provinces of Mozambique exhibited much lower risks of exposure to early marriage in relation to females who reside in the Niassa province of Mozambique. Conversely, females who reside in the Cabo Delgado and Manica provinces of Mozambique exhibited the highest risk of exposure to early marriage in relation to females residing in Niassa. The results obtained in this study replicate the findings obtained in a study that was conducted by UNICEF in Mozambique in the year 2010, which found substantial variations in the prevalence of early marriage across the southern, central and northern regions of Mozambique (UNICEF, 2011). The study established that Mozambique's southern provinces specifically Gaza, Inhambane and Maputo had marriage rates less than 10%, subsequently

followed by the central regions specifically Manica, Tete and Sofala which had an average percentage of early marriage of 20% (UNICEF, 2011). In addition, regions in the North of Mozambique namely Cabo Delgado and Niassa had increased rates of early marriage which were 24% and 30% respectively (UNICEF, 2011).

With respect to the regions shown to have significant differences in Table 4.5, a possible reason that can be provided for these differentials in age at first marriage across these regions could be that people in these regions practice different cultures and customs and have different belief systems and societal norms. Additionally, the study found that polygamy is predominantly prevalent in the central provinces with around a third of females in Manica, Tete and Sofala in such marital unions (UNICEF, 2011). Additionally, it was also found that polygamy is predominantly practiced with a percentage of 31.3% of older females residing in polygamous households, ranging from 40.9% in Mozambique's southern province of Inhambane to approximately 21.6% in the north province of Zambezia (MISAU, 2004).

In providing a further elaboration for these regional differentials, an alternative explanation that can be provided as to why females residing in the Manica and Cabo Delgado provinces of Mozambique exhibited the highest risk of exposure to early marriage in relation to females residing in Niassa can possibly be attributed to an old traditional marital practice that is still commonly practiced today in a number of African countries known as *Kuzvarira. Kuzvarira* is a custom that involves agreeing to marry off a girl child prior to the child being born, and the young girl is often married off at an early age when it is felt by the parents that the child has matured enough to accomplish her responsibilities as a wife (Hanzi, 2006). Furthermore, this cultural practice was extensively practiced before the period of

colonialism when the elderly had the capacity to obtain young child brides in exchange for food during periods of famine (Jeater, 1993).

For instance, a study conducted in Mozambique on the abuse and exploitation of females' constitutional rights, found that the custom of kuzvarira is commonly prevalent among the Ndau society of rural Manica and Sofala provinces (Mawere & Rambe, 2012). Additionally, it can be argued that early marriage is a predominant practice in the northern regions based on the fact that the northern regions are dominated by patriarchal customs encompassing tradition and religion (Tvedten, 2010). This could possibly mean that elders residing in the northern regions play a major role in grooming young females through the practice of certain rituals and dictate specific cultural norms concerning the appropriate age at which young females can enter a marital union.

Contrary to these findings, in Mozambique's southern regions, economic development and migratory movements have resulted into some degree of modernisation relative to other regions in the nation (Tvedten, 2012). Since these regions are part of urban Mozambique, it can be suggested that public services and amenities are generally more accessible compared to people residing in rural Mozambique thus making the region more modernised. This further means that people who reside in the southern region have an increased likelihood to hold modern views about marriage due to access to mass media as well as the modern life they have grown accustomed to.

Furthermore, it has been found that females who reside in households headed by men in the cities located in the southern regions tend to have stronger decision-making power in relation to females residing in rural settings (Tvedten, 2012). It can thus be argued that these indicators thus serve as reasons for the low early marriage rates in the southern

regions. In support of the previous arguments, studies further advocate that the combination of dire financial circumstances and increasing accommodation costs in several cities perpetuate entering marriage at a later age, which have contributed to reproductive changes in sub-Saharan Africa (Gurmu & Mace, 2008; Shapiro, 2015). Another reason for the delay in marriage in urban areas according to literature is that increasing urbanisation is closely linked with postponing marriage due to the environment of an urban lifestyle (Mensch et al., 2005).

Furthermore, certain laws and legislation pertaining to the issue of early marriage could be more rigid in these areas thus preventing the practice of early marriage. These previous works thus offer possible reasons for the low entries into early marriage that are evident in the south. A possible reason that can be provided for low rates of early marriage among females in the Gaza province of Mozambique can be ascribed to the fact that females residing in Gaza now have socioeconomic duties and are politically involved (Tvedten, 2010). In addition, females residing in Gaza hold a number of positions in parliament and they tend to conform less to cultural norms dictated by religion and traditional customs (Tvedten, 2010). The highest parliamentary positions that females residing in Gaza hold include that of the President of the Municipality of Xai-Xai and the Head of the Chókwé Administrative Post of Macarretane (Tvedten et al., 2010).

Additionally, literature indicates that females residing in the southern provinces are economically active as they participate in the informal economic sector and young females have the same level of education as young males (Tvedten, 2010). Furthermore, polygamous practices are not a common occurrence and a substantial proportion of females living with their male counterparts are not in marital unions but in a cohabiting union

(Tvedten, 2010). These indicators could thus serve as explanations for the low rates of early marriage in the southern regions of Mozambique. In addition, Maputo is the capital city of Mozambique which suggests that it is the centre of economic activity and trade. Due to the fact that there are more services and amenities available in the capital city compared to other regions, it can be argued that females living in urban settings have a reduced likelihood of being subjected to political, economic and social marginalisation thus allowing them the freedom to pursue their economic and educational endeavours.

Other reasons for the low rates of early marriage in these southern regions could be due to the fact many men are migrant workers and often travel to South Africa in pursuit of obtaining jobs (Mcdonald et al., 2000). As a result, it is highly likely that marriage rates will be low because of the shortage of men who could be potential suitors to the young females. These findings thus suggest that marriage in the Central and Northern regions of Mozambique is highly valued and respected compared to the southern regions. Additionally, low levels of early marriage in the southern regions can be explained by the laws that have been enforced by the government that legislate marriage age as well as increased participation of women in the economy.

In consideration of the current age of the respondent, the Kaplan-Meier graphs utilised in this study demonstrated that early age of first marriage was particularly highest among 50% of females who were below the age of 18. This finding is congruent with a report that was published in 2013 which found that over 50% of all marriages in Pakistan comprised of females below the age of 18 (Nasrullah et al., 2014). Another study that provided retrospective data of the DHS also established that 53% of girls aged 15-19 in West and Middle Africa, had entered a marital union before age 18 (Mensch et al., 2006). Additionally,

it has been reported that close to half of the females who are between 15 and 19 years of age in Nigeria, are presently in a marital union (Walker et al., 2013). Furthermore, it was also observed in the results obtained in this paper that early age of marriage is associated with a decline in the respondent's age. This can be ascribed to the fact that older females have an increased likelihood of being autonomous, less economically reliant on their families and are participants in the labour force and economy. As a result, this thus makes them less susceptible to the discriminatory practice of early marriage in relation to younger females.

The univariate and multivariate results shown on Tables 4.4 and 4.5 indicated the age of the female as the most pivotal characteristic that influences the age of first marriage of a female. In support of the previous statement, a previous study suggested that the most crucial variable in demographic enquiry is age because crucial events such as fertility, mortality, marriage and divorce are reliant on age (Palamuleni, 2011). A previous study that was conducted in Bangladesh established that females whose age ranges from 45-49 had twice the likelihood of entering a marital union before their 16^{th} and 18^{th} birthdays in relation to females aged 20-24 (Kamal, 2012). Additionally, females who are between 25-34 years were found to have an increased probability of getting married earlier than females whose age ranges between 15-24 years (Ayiga & Rampagane, 2013).

A possible reason that was suggested was due to the fact that values about marriage are changing over time. Additionally, rates of early marriage may be different in the age cohorts shown above possibly due to increased educational qualifications of younger females in relation to the older females as well as any economic transitions that may have occurred in the country (Kamal, 2012). Despite the fact that age has been deemed significant in

influencing the age of first marriage of a female in both previous studies as well as in the current study, it is important to mention that the results obtained in this study provided findings that are not consistent with other studies. This is mainly due to the fact that this study established higher early marriage percentages amongst females in the 15-19 and 20-24 year age cohorts compared to other age groups.

Based on the fact that slight differences were discovered between the current study and previous studies, it is vital to consider that the results obtained are congruent with the context in which this study was conducted. In thorough elaboration, this study previously established that Mozambique is among one of the sub-Saharan African countries which has severe cases of early marriage in the world today. In partial support of the previous statement, one study found that 48%, 42% and 29% of females aged 15-24 have entered an early marital union in sub-Saharan Africa, Latin America, South Asia and the Caribbean (Asrese & Abebe, 2014). In addition, a study that revised patterns, changes and elements of female age at first marriage in 32 sub-Saharan African countries over the past 50 years as well as estimates of the average age at first marriage, found that the average age at first marriage is still low particularly among females aged 15-19 (Garenne, 2004). This is however, with the exception of Namibia, Botswana and South Africa, where the rate is high (Garenne, 2004). This previous finding suggests that Mozambique could be among one of these sub-Saharan African countries which have low median age of first marriage rates, particularly among females in the 15-19 year age groups.

Contrary to the findings of this study, a distinctive feature that emerged in one study showed that young peers have a lower likelihood of entering a marital union as children due to increased educational attainment as well as socioeconomic transition over time (Kamal,

2012). This finding is in sharp contrast to the literature that was presented in this study regarding the context in which this study was conducted. For instance, previous existing literature indicated that over half of the females residing in developing nations such as Niger, Mali, Mozambique and Bangladesh have been reported to have entered a marital union before their 18th birthdays. In these nations, over 75% of the population survive on less than two dollars daily (Population Reference Bureau, 2005). This is because these countries have a low Gross Domestic Product (GDP) and as a result, poverty is rife and accelerates the cycle of early marriage, which in turn generates further inequality and impoverishment.

Additionally, previous research indicated that gender inequality is still a predominant phenomenon that leaves females being the most marginalised in relation to males, in all sociocultural, political and financial domains. This finding holds true for this study as the percentage distributions shown in Table 4.1 indicate that majority of all early marriages comprise of females (61% respectively) and there is low female secondary and tertiary school enrolment. One study also confirmed that females in Mozambique remain disadvantaged in all political, economic and sociocultural spheres (Tvedten et al., 2009). Furthermore, one study indicated that little has been done to improve female literacy based on the fact that only 40% of females aged 14 and above are literate in Mozambique (World Bank Group, 2012). These findings thus indicate that early marriage is indeed prevalent among females aged 15-19 and that it is imperative to consider the context in which this study was conducted. Therefore, the age differentials can be attributed to the fact that previous studies as well as the current study were conducted in different contexts using different methodological paradigms.

In terms of religious affiliation, the survival estimates further demonstrated that majority of females below the age of 18 who do not follow any religious denomination were found to have entered a marital union at an early age. This finding is in sharp contrast to a study which found that females who uphold religiosity and perceive it to be important are more likely to get married at an earlier age (Rendon et al., 2014). A reason for this difference is that this study established that there is a high level of cultural and traditional salience in certain regions within Mozambique and this may thus be the key factor accounting for this difference. In thorough elaboration, one study reported that traditional customs and culture dictate the position of females particularly in the northern regions of Mozambique (Tvedten, 2012). Furthermore, a study that was conducted among 120 households in northern Mozambique found that 86% of the respondents practice ancestral rituals and initiation rites (Tvedten et al., 2009).

Furthermore, previous literature established that there is a positive association between being religious and being wedded (Uecker et al., 2007). In addition, one study found that religious customs and beliefs play a role in influencing people's views regarding matrimony and pregnancy, thus religion is likely to affect a female's age at first marriage (Ikamari, 2005). The unadjusted bivariate results shown in Table 4.4 initially indicated that religious affiliation had a significant effect on age at first marriage among females in Mozambique. However, after adjusting for other covariates, the multivariate results indicated that religious affiliation had no effect on age at first marriage among females in Mozambique. The results obtained in this study as portrayed on Table 4.5 indicated that there is no difference in the relative hazard ratios of exposure to early marriage among females in all the various religious affiliations, as the generated hazard ratios to exposure were all 1% (Hazard ratio: 1.01).

The results obtained in this study are in sharp contrast to studies that were conducted previously which found that females who are Protestant have an increased hazard of entering an early marriage in relation to other religious denominations. Lehrer's (2000) study is consistent with other studies which established that females who follow the Protestant religious denomination, marry earlier than females who are Catholic. In addition, another study found similar results which showed that Protestants in general, and conservative Protestants specifically, marry earlier than those who do not follow any religious denominations (South, 2001). This is mainly because Protestant leaders emphasise marriage and strongly urge their members to enter marital unions and once they have done so, to avoid divorce except for compelling reasons (Wilson & Musick, 1996). In spite of the insignificant finding, even though the results produced the same hazard ratio of exposure to early marriage for all the religious denominations (1%), the degree of exposure was not the same.

The results showed that the hazard ratio of exposure to early marriage was 1% higher for females who are Catholic as well as for females who follow other religious denominations. Conversely, the computed hazard ratio of exposure to early marriage was 1% lower for females who are not religiously affiliated. These results thus suggest that there are slight differences in the degrees of exposure to early marriage. To illustrate the previous argument, one study found that people who are not religiously affiliated tend to be involved in cohabiting unions and have a lower likelihood of entering a marital union, when compared to the religiously affiliated (Xu et al., 2005).

Based on these findings, it can be argued that the reason why religious affiliation has no influence on age at first marriage could be due to the fact that people residing in certain

regions in Mozambique (particularly central and northern regions) adhere to other African traditional customs or norms solely in the absence of religious practices. This inference is evident from Table 4.1 which shows a large majority of respondents who do not follow any religious denominations and therefore religion has no significant influence whatsoever. In addition, a previous work indicated that the combined influence of traditional beliefs and religiosity may be considered to be more of a strong predictor of early marriage as opposed to relying on religious status only (Wetheridge & Antonowicz, 2014). Moreover, one study reported that no one religion is solely related with the practice of early marriage (Jain & Kurz, 2007).

5.4 Discussion on socioeconomic characteristics associated with age at first marriage in Mozambique.

With regards to educational level, a study conducted by the ICRW in 18 of the 20 nations with high early marriage, confirmed that the education that a female attains is considered to be the strongest determining factor of the age of her first entry into marriage (Jain & Kurz, 2006). The univariate and multivariate results obtained in this study indicated educational level as one of the characteristics that have a statistically significant influence on age at first marriage among females in Mozambique. The results obtained in this study revealed that females with a primary education had a higher hazard ratio of exposure to early marriage in relation to females with no education. Conversely, the results further indicated that females with a secondary education displayed a lower hazard ratio of exposure to early marriage in relation to females with no education. Additionally, the lowest hazard ratio of exposure was exhibited by females who have tertiary qualifications.

The findings of this study are thus in accordance with a study which found that females with no educational qualifications tend to enter a marital union earlier than females who have a secondary or tertiary educational qualification (Loaiza Sr & Wong, 2012). Additionally, one study found that females with a primary education are twice as likely to enter an early marital union compared to those with a secondary or tertiary education (Davis et al., 2013). In addition, females who have no educational qualifications have three times the probability of getting married before their 18th birthday as opposed to females who have secondary or tertiary qualifications (Davis et al., 2013). A possible reason for this differential can be ascribed to the fact that people with an advanced education have more access to information pertaining to the consequences associated with the practice and gain knowledge of such practices through mass media. Furthermore, the more years they spend in school, the less likely they are to delay their entry into first marriage (United Nations Commission on Population and Development, 2002). Another study provided empirical evidence of the reverse effect and reported that every extra year of delaying marriage is related with additional years of school attendance (Field & Ambrus, 2006).

A distinctive feature that emerged in this study as shown on Table 4.5 indicated that the hazard ratio of exposure to early marriage was 5% higher for females who are primary graduates in relation to those with no educational qualifications. This finding is unexpected considering the fact that vast literature suggests that females with a primary education have slightly lower levels of exposure to early marriage when compared to females with no education. The result obtained in this study can be supported by a current study which found that females who are primary graduates have a higher likelihood of entering a marital union before their 18th birthday in relation to females with no educational qualifications although they have a considerably reduced likelihood of entering a marital union before age

15 (UNICEF, 2015). Previous research indicates that a possible reason that can be provided for the result obtained is that in certain societies, virginity before marriage is highly valued and therefore young females who are enrolled in school are frequently forced to end their schooling career by their parents immediately when they reach puberty (Bayisenge, 2009). This is due to the perceived fear that the young females will receive unwanted sexual attention from male students and teachers, and therefore pledging them in marriage is considered to be a protective measure against premarital sexual intercourse (Bayisenge, 2009).

This is particularly the case in Mozambique as it has been reported that in the Makua ethnic group, young females are considered to be adults once they reach puberty (Casey, 2014). As a result, young females are withdrawn from school as it is deemed inappropriate for them to remain in school once the young female has entered a marital union unless the spouse permits it (Casey, 2014). This could possibly be the reason why there are low secondary school enrolment rates among young females in Mozambique. Furthermore, one study suggested that the risk of early marriage is highest among females who have some form of education and it varies by characteristics such as the quality of education and the school environment which may propel young females to enter an early marital union (Wetheridge & Antonowicz, 2014). As expected, the results obtained in this study show a negative correlation between educational level and age at first marriage as they indicate that as the level of education increases, the risk of exposure to early marriage also decreases.

In terms of wealth status, the unadjusted bivariate findings obtained in the study initially indicated that wealth index had an effect on age at first marriage among females in Mozambique. However, after adjusting for other covariates, the multivariate results also

indicated that wealth index had no substantial influence on age at first marriage among females in Mozambique. The results shown in the multivariate adjusted Cox Proportional Hazard regression model in Table 4.5 indicated slight differences in wealth quintiles with the hazard ratios of exposure to early marriage being 3% higher for females who fall in the middle wealth quintile and 6% higher for females who fall in the richest wealth quintiles in relation to those who fall in the poorest wealth quintiles. Once again, the results obtained are highly astonishing as it would be expected that the hazard ratios of exposure to early marriage would be lowest among females who fall in affluent quintiles followed by females who fall in the middle wealth quintiles when compared to those who fall in the poorest wealth quintile.

This is mainly due to the general standard of living and material wellbeing of the females' households. The results obtained in this study are not congruent to a study which suggested that the financial standing of a family is an important predictor of age at first marriage in various civilisations (Garenne, 2004). This outcome proposes that age of first marriage is responsive to the economic state of a household and that economic hardships promote entry into early marriage whereas economic prosperity delays entry into early marriage. Furthermore, another study reported that the pervasiveness of early marriage is associated with wealth because as wealth escalates, early marriage decreases (Davis et al., 2013).

Additionally, data obtained from a global analysis conducted by the United Nations Population Fund across 78 developing countries showed that more than 54% of females who come from poor backgrounds are adolescent brides in relation to only 16% of females who come from 20% of the most affluent homes (Loaiza Sr & Wong, 2012). Possible reasons that can be provided for the differences that exist between the current study and previous

studies are that the current study used a different methodological approach as it looked at age at first marriage as a time-to-event variable and not as a dichotomous nominal variable. It is thus highly likely that the different methods will yield different results. In addition, the variable “wealth index” was used as a proxy but not a thorough measurement of economic status and this could have thus resulted in wealth not being a significant predictor of age at first marriage.

Contrary to all these findings, the results obtained in this study are strongly supported by a study that was conducted recently in Maputo by the UNICEF. The study reported that wealth status has a negative relationship with early marriage and that rates of early marriage are largely explained by regional characteristics rather than social or economic influences (UNICEF, 2015). Another study also found that regardless of the fact that early marriage is rife in families who fall in the poorest wealth quintiles, the practice is fundamentally universal and may almost be common even among families who fall in the richest wealth quintiles (International Planned Parenthood Federation, 2006).

In addition, it is imperative to bear in mind that other strong societal and cultural traditions could be key determinants of age at first marriage among females in Mozambique. This thus indicates that culture is a dominant entity that is practiced across numerous areas of the country. Therefore, it can be suggested that the practise of early marriage is a widespread phenomenon that affects everyone irrespective of whether an individual is poor or rich.

Furthermore, type of place of residence is another characteristic that was found to have no influence on age at first marriage from the multivariate adjusted regression model even though it was found significant in the bivariate unadjusted model. Regardless of the non-

significant result, this study found that the hazard ratio of exposure to early marriage was 3% higher for females residing in rural settings in relation to females who reside in urban settings. In addition, the results obtained in this study are not consistent with previous works which showed that residing in a rural setting escalates the probability of entering a marital union at an early age (Jain & Kurz, 2007). Furthermore, previous works advocated that delaying entry into early marriage is more apparent in urban settings in relation to rural settings (Garenne, 2004; Mensch et al., 2005).

Possible reasons that can be provided as to why residence has no influence on age at first marriage in this study is due to the fact that previous researchers utilised the Binomial Logistic regression model and the stepwise Ordinary Least Squares regression for their analysis (Jain & Kurz, 2007). The use of different methodological approaches is thus likely to yield different results. This is because the interpretation of the Binomial Logistic regression is through the odds ratios and interpretation of the Ordinary Least Squares is through the coefficients. Conversely, interpretation of the method utilised in this study (Cox Proportional Hazard regression) is through the hazard ratios. The approaches used by the previous study and the current study will yield different results based on the fact that the previous study treated age at first marriage as a dichotomous nominal outcome and also as a continuous response outcome. This will thus result in the regression describing the change in Y (outcome variable) as being associated with a unit change in X (Predictor variables).

Contrary to the previous study, this study has looked at age at first marriage as a time-to-event outcome which advocates that age at first marriage has been treated as the probability of it occurring at a specific time point if an individual survives to that certain age. In addition, since Mozambique has been deemed as one of the countries that has severe

cases of early marriage in the world today, it can be argued that early marriage is a shared social problem within the context of Mozambique. This is mainly because it affects any citizen since the rates are particularly high irrespective of whether an individual is rich, poor, resides in an urban setting or rural setting.

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

The aim of this study was to examine the levels of age at first marriage among females in Mozambique as well as to identify the demographic and socioeconomic characteristics that have an influence on age at first marriage. The overall inference drawn from this study was that early marriage is a pervasive phenomenon that is still carried out in the northern regions of Mozambique and is particularly prevalent among young females aged 15-19 who have a primary or no education. The regional, demographic and socioeconomic differentials thus indicated that early marriage is a serious social issue that requires effective ongoing interventions across all sectors of civil society if progress is to be brought about in eradicating this harmful practice.

Moreover, the results emanating from this study suggested that a number of inequalities exist in the country and these inequalities are not only exclusive between males and females but also exist among young females themselves, particularly those who reside in the rural regions of Mozambique. This is mainly due to the fact that they are more disadvantaged and live in circumstances where traditional authorities and family structures dictate the age that is deemed appropriate for entry to marital union and childbearing as opposed to young females who are exposed to contemporary beliefs and improved educational systems in the urban areas. In addition, the inference that can be drawn from the findings is that customary laws of marriage that have been imposed by traditional authorities specifically among citizens living in the rural areas of Mozambique are not aligned with the main civil laws that have been implemented by the Mozambican government and made rigid in order to foster gender equality and improve the situation of

women. This thus suggests that there are inconsistencies in the laws and thus they do not sufficiently protect young females from entry into early marriages.

Based on this, it is pivotal for the Mozambican government to scale up strategies that will lead into traditional authorities being mobilised to reconsider their customary laws in order to obtain better insight into their social contexts as well as enable the government to reinforce main civil laws at both the local and national level. Such measures may eventually result in traditional and cultural practices that violate the rights of females being completely outlawed.

Although the social issue of early marriage has received considerable attention in literature, knowledge gaps have remained particularly in the context of Mozambique, in obtaining a comprehensive overview in the drivers and approaches that are beneficial in the eradication of early marriage. Thus, the significant contribution that this study has made to the body of literature is that it has shown that early marriage is not only driven solely by socioeconomic and demographic factors, but various underlying cultural factors subtly operate through these factors and should thus be studied in future research.

The effort to eradicate the practice of early marriage was not included as a target in the Millennium Development Goals (MDG) programme although the practice of early marriage directly inhibited each of the eight development goals from being achieved (Equality Now, 2014). Therefore, failure to thoroughly address the issue of early marriage will result in the inhibition of the SDG goals concerning the eradication of poverty, achieving universal education and combating the development and spread of HIV/AIDS being unmet. Therefore, by improving such conditions particularly in the regions affected, transformation

is likely to occur thus bringing an end to the harmful practice of early marriage as well as the health consequences associated with the practice.

As a final point, the theoretical framework that this study utilised should be expanded to include demographic characteristics in conjunction with the socioeconomic and environmental factors that have been included in Bongaarts (1978) Proximate Determinants of Fertility Framework as they are also key explanatory characteristics that are positively associated with age of first marriage. It is crucial for these characteristics to be encompassed in the framework.

6.2 Recommendations

6.2.1 Further research

Knowledge of the specific demographic and socioeconomic predictors may contribute to public discourses pertaining to the issue of early marriage, which will generate further scholarly research. This study further advocates that it would be interesting if further research could be conducted to determine if there is an association between family household structure and age at first marriage. This could be done by looking at whether young girls who reside in a male-headed, female-headed, blended family household or single-parent household are more likely to enter an early marital union or whether these family household structures delay entry into early marriage. These findings could thus be beneficial in deciphering if family household structure has any form of association with the age of first marriage of an individual and whether these family structures encourage or discourage entry into marriage at an earlier or later age. Furthermore, further research

could be conducted to identify certain cultural factors and ethnic norms that could have paramount significance in explaining the phenomenon of age at first marriage compared to simply focusing exclusively on demographic and socioeconomic factors only. These studies can be conducted using a mixed-method approach in order to obtain richer, in-depth narrative results.

The type of qualitative study method that would be appropriate for this study would be the use of in-depth interviews with the young females who are or have been exposed to the practice of early marriage as well as the parents of the young females. In-depth interviewing is a narrative research method that entails carrying out conversations with individual participants in order to determine their insights on a specific issue or situation (Boyce & Neale, 2006). In-depth interviews would be beneficial as they provide better insight on people's personal experiences and make it possible for new issues to emerge that the researcher did not consider before. The use of in-depth interviewing would thus enable the investigator to comprehend the reasons behind the public's motivations to pledge their daughters in early marital unions. Findings obtained from the respondents may also assist the researcher to confirm or disconfirm the findings obtained in the survey thus enabling the researcher to be able to explain and interpret the major drivers of the practice of early marriage. Key informants who are more familiar with and reside in the communities affected by the practice of early marriage as well as stakeholders, can also be interviewed in order to obtain further and more detailed information on the practice. Furthermore, Community-Based Participatory research can be conducted in order to investigate the issue at hand. This research can include stakeholders, the communities mostly affected by the problem as well as civil society actors who can work collaboratively to develop strategies aimed at eliminating the practice.

6.2.2 Policy significance

With regards to policy recommendations, certain measures such as investing more on female education need to be implemented in regions with high rates of early marriage. This should be done if progress is to be brought about in reducing rates of early marriage as well as practices such as polygamy and child-pledging. Additionally, more effort should be exerted in providing funding to policies and programmes that aim to reduce the practice of early marriage. These policies and programmes include the Regional Psychosocial Support Initiative (Repssi), National Coalition Against Child Marriage In Mozambique and the Civil Society Forum For Child Rights In Mozambique (ROSC). The Regional Psychosocial Support Initiative (Repssi) is an initiative that aims to reinforce community and family capabilities to foster the psychological and social wellbeing of their children and young people (Regional Psychosocial Support Initiative, 2013). It is also aimed at providing care to children suffering from HIV/AIDS as well as impoverishment (Matikanya et al., 2006). The National Coalition Against Child Marriage in Mozambique is a coalition that was formed in December 2012 under the "Girls Not Brides" initiative and is aimed at encouraging the need to illegalise and eliminate the practice of early marriage (UNICEF, 2013).

Additionally, the Civil Society Forum for Child Rights in Mozambique (ROSC) is an initiative that was supported by the UNICEF aimed at eradicating early marriage (UNICEF, 2014). The statistics obtained in this study will thus indicate the magnitude of the harmful practice. They will also enable the policymakers of these organisations to raise awareness among government and civil society to educate the community concerning the consequences of early marriage on childhood health and wellbeing. Additionally, by working collaboratively in combating the harmful practice, this will result in the country in working towards

achieving post 2015 Sustainable Development Goals of combating poverty, HIV/AIDS as well as achieving universal education and equality.

Furthermore, a programme known as the National Strategy for the Prevention and Combating of Early Marriage has been recently established by a Congress of Ministers in Mozambique and it is a five year plan programme aimed to run within the period of 2015-2019 (Girls Not Brides Mozambique, 2014). The findings of this study are thus beneficial to the programme as they will enable the stakeholders handling the programme to develop effective strategies in eradicating the harmful practice through targeting the affected regions. Additionally, certain measures need to be implemented to improve female literacy as well as eradicate gender inequality. This can include providing young females with educational opportunities such as travel grants and scholarships that will enable them to study further and may thus likely delay marriage. Educational campaigns should be implemented that are targeted at teaching young females as well as their parents about the detrimental consequences that early marriage can inflict on their physical, reproductive, social as well as psychological wellbeing. Termination of educational activities should be prevented through providing school children, particularly girls, with incentives that will keep them enrolled in school.

Traditional leaders residing in regions with high prevalence rates can be mobilised to review their traditional norms and raise awareness about the effects that these norms can have on their community. This can hopefully change the attitudes of the community at large. Social and cultural norms that perpetuate inequity should be changed through introducing educational campaigns that aim to eradicate the practice. Social norms and beliefs that dictate behaviours that are deemed appropriate for both genders should be changed or

terminated. These are the same norms that marginalise females and thus further perpetuate the cycle of gender inequality by marginalising females economically, politically and socially.

6.3 Limitations of the study

Over-reporting or underreporting of age at first marriage could be a key limitation in this study. Being illiterate, residing in a rural setting and coming from a low socioeconomic background are key characteristics that are deemed to be associated with age misreporting (Borkotoky & Unisa, 2014). A possible reason for under or over-reporting of age at first marriage could be that the females who are married (particularly young females) could prefer to appear older than they actually are (Van de Walle, 1968). In addition, it has been reported that females who were born in earlier years tend to report lower ages of first marriage as they grow older (Cremin et al., 2009). Conversely, females born in later years tend to report higher ages of first marriage so as to be desired socially (Cremin et al., 2009). Furthermore, another reason for age misreporting for the females who have ever been married could be that enumerators often exclude other females from the suitable age ranges so as to decrease the amount of respondents that need to be questioned (Marckwardt & Rutstein 1996).

In addition, there could be a problem with recall bias whereby older respondents could have incorrectly reported their age of first marriage due to lack of accuracy to recall the memory of their actual age of first marriage. This may thus possibly affect the internal validity of the study. However, regardless of the limitations listed above, it is not envisioned that these limitations could have posed serious implications on the findings of this study. This is due to the fact that the measurement of vital rates such as age reporting that are calculated in the

DHS-II assessments, are indisputably far less subject to bias than those calculated from DHS-I or World Fertility Surveys (Marckwardt & Rutstein, 1996). Additionally, the data obtained from the DHS is accurate, reliable and representative of the entire population of study irrespective of the fact that the data often needs to be cleaned and recoded at times.

Furthermore, since the study is cross-sectional, causation cannot be inferred thus making it challenging to identify the direction of the association between the predictor variables and the outcome variable. In addition, the DHS is a secondary data source that has limited data and therefore variables encompassing cultural factors which could have been key determinants of age of first marriage are not included in the survey. Since the DHS does not consist of these cultural attributes, this shortcoming did not affect the results obtained in this study but simply provided an indication of the possibility of culture being one of the significant determinants which thus calls for further research.

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