Determinants of Childbearing among Young People in South Africa: Findings from the National Income Dynamics Study

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Abstract

Young people in South Africa grow and develop in a context of high unemployment and poverty. These factors increase their vulnerability of engaging in risky sexual behaviour. The negative outcomes associated with early childbearing have far reaching consequences for not only the young mother and child but also the country's labour market and economy. As a result, key to addressing childbearing among young people is to understand the social context which young people are faced with. Therefore, this study aims at identifying the extent and determinants of childbearing among people aged 15-24 years, in South Africa.

The data for the study comes from the 2008 National Income Dynamics Study (NIDS). The analysis is restricted to 2623 females aged 15-24 years at the time of enumeration. Analysis is conducted on weighted data so that inferences can be made about the population. The analysis uses descriptive and multivariate analysis to identify possible determinants of early childbearing among young people.

The results highlight factors such as age and marital status as possible socio-demographic determinants of childbearing among young people. Socio-economic status is also identified as one of the main predictors of early childbearing for females aged 15-24 years. Social issues such as transactional sex, gender violence and coerced, early sexual debut are discussed as possible determinants of early childbearing. However the analysis of these factors is restricted as they are not measured in the dataset. It was concluded that understanding the social context which influence young peoples' decision to engage in risky sexual behaviour is key to addressing the issue of early childbearing.

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Table of Contents

List of Tables

List of Figures

Acronyms

AIDS	Acquired Immunodeficiency Virus
CAPS	Cape Area Panel Study
CTOP	Choice on Termination of Pregnancy
HIV	Human Immunodeficiency Virus
NAFCI	National Adolescent Friendly Clinic Initiative
NGO	Non-governmental organization
NIDS	National Income Dynamics Study
PSU	Primary sampling unit
SALDRU	South African Labour and Development Research Unit
STI	Sexually transmitted infection
UCT	University of Cape Town
UNAIDS	Joint United Nations Programme on HIV/AIDS
WHO	World Health Organization

Dedication

To my wonderful parents, Ashok and Daisy Kara, who have been a source of inspiration, motivation and courage.

Chapter One: Introduction

1.1 Introduction and background

The period of adolescence is characterized by a great deal of instability and change. During this period, young people are likely to adopt new roles and responsibilities, experiment, establish their identity and establish themselves in society. As a result, they are vulnerable and require stability and moral guidance and support. A change in hormonal levels is one of the major changes associated with the onset of adolescence where young people begin to understand themselves as sexual beings. This results in a large amount of exploration into sexual activity which involves a certain degree of risk-taking (Kowaleski – Jones and Mott, 1998). Kowaleski – Jones and Mott (1998) explain that sexual exploration without adequate sexual and reproductive health information and resources increases young people's vulnerability to engage in risky sexual behaviour. Outcomes associated with such behaviour include the acquisition of sexually transmitted infections (STIs) (including the human immunodeficiency virus (HIV)) and unplanned pregnancies. Unplanned childbearing among young people have been linked with a number of long and short term negative outcomes for not only the young female but her child and the country as a whole.

The Acquired immunodeficiency syndrome (AIDS) epidemic has altered the family structure with many countries reporting large number of deaths to economically active individuals. Grandparents who are economically inactive, frail and ill are forced to assume the position of breadwinner and care for grandchildren (Lewis, 2003). Young people are also burdened with the responsibility of caring for younger siblings and sick grandparents. Olukoya (2004) explains that adolescents who assume such roles experience emotional problems which are not consistent with their age. Fulfilling these parental roles stifle their development and skills acquisition, making it difficult to escape the poverty cycle in which many young people are born (McIntyre, 2006). Weak family support structures and poor socio-economic status compounded with sexual experimentation increases young people's likelihood of engaging in risky sexual behaviour. This

increases their risk of experiencing unplanned childbearing. These situations are very contentious as Lloyd (2005) explains that in developing contexts, the success of first-time parents depend on other adult transitions prior to parenthood. This means that transitions such as work, marriage and citizenship are important as it prepares the individual for parenthood and ensures the required resources for successful parenting are available (Lloyd, 2005).

The World Health Organization (WHO) defines individuals aged 10-19 years as adolescents and individuals aged 15-24 years as youth (WHO, 2012). The term young people refer to the combination of these two overlapping age groups (WHO, 2012). Following these international norms, this study uses the terms adolescent and young people interchangeably to refer to females aged 15-24 years. The terms motherhood and pregnancy refer to different events however, for the purposes of this study, these terms are used interchangeable with the term childbearing to provide, where needed, a complete view of the concept of childbearing.

Childbearing among young people is highly prevalent in developed and developing countries. Many countries report a reduced total fertility rate however their rates of childbearing among young people have increased. It is estimated that 11% of births worldwide occur to girls aged 15-19 years, resulting in 16 million girls, aged 15-19 years, giving birth each year (Kaufman, de Wet and Stadler, 2001; WHO, 2008). During the period of 2000 to 2005, it was estimated that the worldwide adolescent fertility rate was 55.3 per thousand adolescents which means that each year, on average, 5.5 % of adolescent girls had given birth (WHO, 2008). Among developed countries, Australia has the sixth highest adolescent pregnancy rate globally and the third highest abortion rate (Miller-Lewis, Wade and Lee, 2005). In Europe, the United Kingdom is reported to have one of the highest rates of childbearing among young people (Whitehead, 2008). The United States has also reported high levels of unintended childbearing and STI diagnosis with 38% of all births being reported as unintended and approximately 19 million diagnosed STI cases every year (Scott et al., 2011). Childbearing among young people is a major cause for concern as there are far reaching negative impacts on the young mother and her child. Many authors have reported negative educational outcomes for young mothers compared to their

counterparts who have not given birth (Kaufman et al., 2001; Menendez et al., 2011; Karra and Lee, 2012). The health of young mothers is also compromised, especially those aged 17 years and below. These young females are at a greater risk of experiencing anemia, pre-mature labour and a host of similar complications. Babies born to young mothers are also at risk of experiencing negative health implications which include low birth weight (McIntyre, 2006; Grover and Sandhu, 2009).

Approximately 95% of births to girls aged 15-19 years occur in developing countries with roughly 2% (of these births) occurring in China and 18% occurring in Latin America and the Caribbean (WHO, 2008). According to the World Health Organization, half of all adolescent births occur to young females in only seven countries. These countries include: India, Nigeria, Ethiopia, the Democratic Republic of Congo, Bangladesh, Brazil and the United States (WHO, 2008). Less developed countries such as Niger and the DRC experience adolescent fertility rates which are twice as high as compared to more developed countries (WHO, 2008). A report on pregnant adolescents by WHO reports that in Niger more that 50% of females experience a birth by the age of 18 years (McIntyre, 2006). High levels of childbearing among young people are a reality for many sub-Saharan African countries. Estimates from a world population report indicate that, in sub-Saharan Africa, the number of births to adolescent girls aged 15-19 years is estimated to exceed a total of 4.8 million births over the period of 1995 to 2020 (Kaufman, de Wet and Stadler, 2001). This approximate increase of about 400,000 more births than the 1996 levels is indicative of the high fertility levels of adolescents and the growth in size of the adolescent cohort in the sub-Saharan region relative to levels in other developing countries (Kaufman, de Wet and Stadler, 2001). In some sub-Saharan countries, trends indicate a drop in the levels of adolescent childbearing but the levels of early births remain high (Kaufman, de Wet and Stadler, 2001). Early births are common in countries where early marriage is a socially accepted norm. In countries such as Cameroon, Mali, Malawi, Nigeria and Niger, where early marriage is a norm, approximately 8-15% of girls have had a child by the age of 15 years (McIntyre, 2006).

Since the 1970's, South African women, on average, have been having fewer children. This fertility trend has been largely influenced by the family planning program imposed on African women during the apartheid era. The government of the time used family planning as a means to control the size of the African population to maintain political control of the country (Kaufman, 1998). The migrant labour system, which resulted in men being away from their family in the homelands, can be understood as a factor which aided in the decrease in overall fertility. The fertility of many African women was also controlled through the use of injectable contraception. This form of contraception was commonly used and advocated for by the apartheid government because they were cost effective and easy to administer (Kaufman, 1998). African women were seldom given information on or the choice of using other types of contraception. The effectiveness of the family planning program can be seen not only in South Africa's low total fertility rate but also by the fact that by the late 1980's it was estimated that 44% of African females were using a method of contraception (Kaufman, 1998).

Although South Africa has one of the lowest total fertility rates in sub-Saharan Africa with fewer than three births per woman nationally, the level of childbearing among young people remains high (Panday et al., 2009). In as early as 1988, it was reported that 30 percent of girls aged 19 years had already given birth at least once (Kaufman, de Wet and Stadler, 2001). Karra and Lee (2012) explain that the rate of childbearing among young people has remained the same since the 1970's at 54 births per 1000 females aged 15-19 years. However, Kaufman and colleagues (2001) argue that this trend is similar to other developing countries where lifetime fertility has dropped close to replacement level whilst adolescent fertility levels have remain high. In the South African context, researchers have noted a double-spiked fertility pattern, one that peaks during adolescent years and the other peaking around the late 20s and early 30s. This suggests that early childbearing does not imply continuous or rapid subsequent child bearing (Kaufman, de Wet and Stadler, 2001). It has been postulated that this may be representative of trends which show low contraceptive use and low prevalence of abortion before the first pregnancy followed by high levels of contraception use (Kaufman, de Wet and Stadler, 2001).

In opposition to this notion, Menendez and colleagues (2011) highlight that the proportion of births to young people have decreased over time. They report that in 1984, 30% of adolescents had given birth by the age of 20 years, this dropped to 23% in 2008. Most of the provinces in South Africa experienced this decrease, with the exception of KwaZulu-Natal (Menendez et al., 2011). Panday and colleagues (2009) report similar results in their study where they explain that the slow decline in adolescent fertility can be understood as a result of national events. For example, Panday and colleagues (2009) list the disruption in schooling due to participation in the struggle against apartheid as one of the reasons for the increased adolescent fertility. Nevertheless, the study highlights that between 1996 and 2001 fertility dropped from 78 to 65 births per 1000 women, resulting in a 10% decline. The 2007 Community Survey revealed a further drop in adolescent fertility to 54 births per 1000 women (Panday et al., 2009). The decline in adolescent fertility is welcomed however the pace of decline remains a concern.

The effects of early childbearing have far reaching social, economic and physiological consequences for both young mother and child (Senior and Chenhall, 2008). Physiologically, young mothers, under the age of 20 years, are at a higher risk of experiencing anemia, premature labour and pre-eclampsia as compared to mothers aged 20 years and older. Adding to this list of pregnancy complications are poor dietary habits and poor nutrition (Grover and Sandhu, 2009). Woldemicael (2005) adds that the lack of prenatal medical care increases the risk of pregnancy complications with older females being more likely to seek prenatal medical care than younger females. Economically, the young female is further disadvantaged because education is essential in order to secure future employment in a knowledge-based economy (Panday et al., 2009). Although young females are allowed to return to school post-pregnancy, in many cases only a third of young mother re-enter the education system (Grant and Hallman, 2008). As a result, their educational achievements and future economic stability are compromised, making it increasingly difficult to escape the poverty trap inherent in many South African communities. Research indicates that the effects of early childbearing on educational achievements and economic progress remain negative and significant later in life, even after controlling for pre-existing socio-economic conditions (Panday et al., 2009). Health problems, the responsibility of parenthood and the lack of education and skills prove to negatively compromise the labour force

earnings of young mothers, thus forcing her to remain in poverty (McDevitt, et al., 1996). This has far reaching consequences for the state and economy because not only is the mother unable to actively participate in the economy, she is also increasingly dependent on social grants (Panday et al., 2009).

Adding to the social and economic consequences of early childbearing is the absence of fathers. Young mothers are often left to provide financially and emotionally for herself and the child as young fathers often deny paternity in an attempt to negate financial and social responsibilities (Kaufman, de Wet and Stadler, 2001). It is acknowledged that in some cases a father's absence is out of his control. Studies explain that their socio-economic situation is no different to that of young mothers. Young fathers are also more likely to belong to lower socio-economic status households, have low educational achievements and aspirations and in most cases do not have the financial resources to care for the child and mother (Panday et al., 2009). Recent research opposes the common perception that young fathers deny paternity and responsibilities associated with child rearing (Panday et al., 2009). The data indicates that young men feel a sense of responsibility and are willing to be an active member of the child's life, upon learning about their impending fatherhood. However, their need to provide financially for the child inhibits their ability to provide hands on care. The high unemployment and poverty forces young fathers to become estranged from their new family (Panday et al., 2009). Zwang and Garenne (2008) highlight similar sentiments indicating that young fathers have no income and therefore are unable to pay the bride price and marry and/or take care of their new family. As a result of these social pressures, young fathers may migrate and live away from their families. Situations in which men are much older than their adolescent girlfriends raise issues of unequal power dynamics within such relationships (Whitehead, 2008). Transactional sex is a reality for many young females as a means of obtaining money, gifts, school fees, protection and other similar items in exchange for sexual favours (Thurman et al., 2006; Whitehead, 2008).

Childbearing among young people is often unplanned. In their study, Panday and colleagues (2009) reveal that over two thirds of young people have reported their pregnancy as unplanned.

The young females interviewed in their study indicated that early pregnancy negatively impacts their educational aspirations and imposes a financial burden in a context already plagued with poverty and unemployment. Resulting from these economic conflicts together with factors such as stigmatization and discrimination and a lack of access to service delivery and information, these young women often resort to illegal abortions which increase their risk of contracting infections and/or experiencing maternal mortality (McIntyre, 2006). It is reported that of the estimated 19 million illegal abortions which occur each year, 2.2 to 4 million abortions are done on adolescents (McIntyre, 2006).

Termination of pregnancy is an option for South African females as the service is provided legally in the country. The 1996 Choice on Termination of Pregnancy (CTOP) Act together with its 2004 amendments provide South African adolescents the option of a safe abortion. This act allows for the termination of pregnancy at the woman's request at twelve weeks or less. The termination is conducted by a certified nurse, practitioner or a doctor. Pregnancies of 13-20 weeks may also be terminated by a doctor if the pregnancy is seen as being a risk to the women's economic, social or psychological well-being or in cases of fetal malformation, rape or incest (Brookman-Amissah and Moya, 2004; Cooper et al., 2005). Medical abortions as opposed to surgical abortions are a better method of termination as it avoids surgical procedures (Cooper et al., 2005). This decreases the risk of experiencing hemorrhaging, sepsis, tetanus, genital lacerations and perforation (Olukoya, 2004). Furthermore, this method could also increase access to legal abortions in situations where practitioners are hesitant to conduct surgical abortions citing moral reasons (Cooper et al., 2005).

Access to legal medical abortions is limited as regiments used in the termination can only be accessed in the private health sector or through non-governmental organizations (NGO's) (Cooper et al., 2005). Discussions on making medical abortions available in the public health sector raise concerns about the timing of its use, as it is possible that females could use the treatment when they are too far along in their pregnancy. Other concerns include that the treatment will be used as a contraceptive measure (Cooper et al., 2005). In addition, the use of

this method requires repeat visits to clinics, issues may arise around the logistics of making these repeat visits. In their paper Cooper and colleagues (2005) describe the logistical difficulties faced by women when attempting to access medical services. They explain that women living in rural areas have to travel twice as much (and in some cases more) than those women living in urban areas, to access health facilities. A lack of information regarding the legality and cost of an abortion also restricts access to this service. As a result, home remedies are used to terminate the pregnancy (Varga, 2002). The following quote describes the ingredients used to produce a formula which would terminate a pregnancy, the information was provided in an interview with a 12 year old girl: "A mixture of *jik* [laundry bleach], fizzy soft drinks, milk, *sta-soft* [fabric softener], Epsom salts and castor oil to 'soften the stomach' so a girl could go to the toilet and 'lose the baby" (Varga, 2002: 288).

Although access to medical abortions would be free in the public sector, the cost of accessing this service could pose as a barrier. Cooper and colleagues (2005) highlight that the lack of adequately trained staff, negative attitudes of health care providers and inadequate referrals for abortions are also barriers to the access of legal abortions. In many cases, an illegal abortion is the preferred method of termination as it reduces the risk of community members finding out. In a study on South African adolescents, Varga (2002) highlighted that a high percentage of young people reported that they know someone who had an illegal abortion. The negative health outcomes associated with illegal abortions have social implications for young females. For example, the contraction of a pelvic infection may result in infertility. This is problematic as infertility and childlessness is viewed negatively in a South African context. Furthermore, stigma associated with the use of abortion services is also an issue which can reduce the young female's chances of marriage (Olukoya, 2005). Religious and moral issues surrounding the termination of life may also be a deterrent to the use of abortion services for young people. However, Panday and colleagues (2009) explain that young people adopt a stance of 'relative morality' to abortion as it is a means of securing their educational opportunities and avoiding social and economic hardship.

1.2 Rationale for the study

Young people are seen as future leaders of the country. Therefore, importance must be placed on providing a context which fosters healthy development and skills acquisition in order to mould young individuals with good morals and citizenship. Studies have reported a drop in adolescent fertility rates however the pace of this decline remains problematic. Young people in South Africa grow and develop in a context of high unemployment and poverty which increase their vulnerability to engage in risky sexual behaviour. Poverty is a fluid state which allows people to transition in and out, however the current economic climate makes escaping the poverty trap a challenge. This is of particular concern when addressing the issue of childbearing among young people as studies have highlighted that the correlation between poverty and childbearing among young people is not linear (Kirby, 2007; Panday et al., 2009). Poverty has been identified as a cause and consequence of childbearing among young people especially in sub-Saharan African countries where poverty levels are continuously increasing (Panday et al., 2009). In addition, unplanned childbearing is often a result of risky sexual behaviours among young people where some of these sexual encounters are coerced, linked to poverty and/or social exclusion (McIntyre, 2006).

Besides the crippling social and economic effects of early childbearing on mother and child, childbearing among young people also results in negative effects on the state and economy. The young mother's low skill level limits her participation in the labour market thus making them more dependent on social grants. Early childbearing may also have implications for national efforts to reduce population growth (McDevitt et al., 1996). Research indicates that for young South Africans who experience early childbearing, the second birth is delayed (Kaufman, de Wet and Stadler, 2001), however, this is not associated with a decline in total fertility. On the contrary, childbearing among young people has been associated with increased fertility over a woman's reproductive period (McDevitt et al., 1996).

Therefore, understanding how socio-economic status influences unsafe sexual behaviour among young people is important in developing policies and interventions in a context of high HIV

prevalence, poverty and unemployment. In addition, this area of research has been largely addressed using qualitative research methods. This study aims to shed light on the topic using not only quantitative research methods but also a nationally representative data set.

1.3 Aims and objectives

This study aims to determine the extent of childbearing and the determinants of childbearing among young people, aged 15-24 years, in South Africa.

This study aims to address the following key questions:

1. What are the levels of childbearing among young people?
2. What are the socio-demographic and economic factors which are associated with childbearing among young people?
3. To identify other risk factors associated with early childbearing.

1.4 The data

The data for the study comes from the National Income Dynamic Study (NIDS). NIDS is South Africa's first nationally-representative household panel study and is funded by the South African presidency. It is designed to track and collect data on individuals and the households in which they live, at two year intervals. The aim of the study is to monitor and investigate poverty in the country (Leibbrandt et al, 2009). The baseline wave of the study was conducted in 2008 where 28 000 individuals and 7305 households were interviewed. However, the data does not include information on individuals living in institutions such as prisons, halls of residence or boarding school hostels (NIDS, 2012a).

The study collects information at the individual and household level on a range of themes. More specifically for this study, a comprehensive description of each female respondent's birth history is collected. This allows for the investigation into the number of births the female has

experienced, the respondents age at the time of the birth/s and whether a child support grant is collected in the household. Information is also collected on the educational level and employment status of the respondent, whether the respondent was orphaned before the age of 15 years and the living arrangements of the respondent's parents.

1.5 Theoretical framework

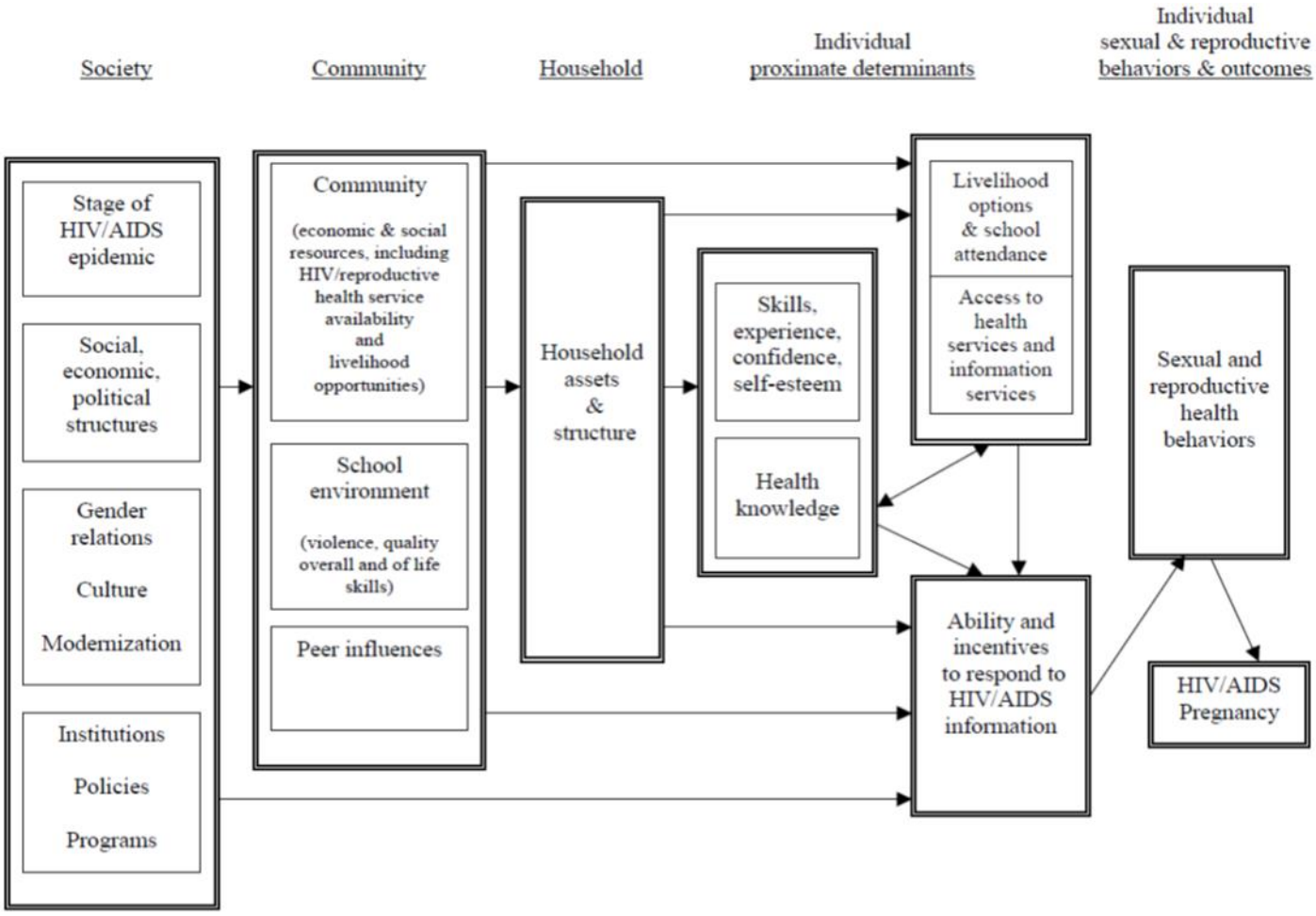
The framework proposed by Hallman will be used to explain how an individual's socio-demographic and economic factors influence their decision to engage in risky sexual behaviour and thus experience childbearing. Unlike other models, this framework focuses on exogenous factors such as society, community and household factors which influence an individual's proximate determinants and the outcome variable of interest (Hallman, 2005). The model takes into account the effect societal, community and household factors have on an individual's decision to engage in safe sex practices.

The model identifies societal factors as gender relations, culture and various policies and programs. The community factors include an individual's school environment, peer influences and economic and social resources available to members of the community. While the household factors focus on the structure of the household and household assets. This framework looks at the relationship between these factors and the individual's proximate determinants such as their access to health information and services, skills and experiences and livelihood options. These proximate determinants are understood to have an impact on the outcome variable of interest (Hallman, 2005), which in this case, is childbearing among young people.

For example, this framework recognizes that peer influence impacts young people's ability to respond to information regarding safe sex practices. This influences their decision to engage in safe sex behaviour which increases their risk of experiencing an unplanned pregnancy (Hallman, 2005). Similarly, this framework recognizes that belonging to a low socio-economic household plays a role in an individual's decision to engage in transactional sex. This reduces her safe sex

negotiating power which influences her decision to engage in risky sexual behaviour. Thus based on the above discussion, the study employs this conceptual framework to show how a young person's socio-economic and socio-demographic factors influence their decision to engage in risky sexual behaviour.

Figure 1.1: Hallman's Socio-Economic Framework



Source: Hallman, 2005

The characteristics of the framework are captured in Figure 1.1. For example, the framework takes into account that gender relations (societal factor) affects an individual's ability to respond to information and resources regarding sexual and reproductive behaviour. This ability is then

understood to have a direct impact on the decision to engage in safe or unsafe sexual and reproductive health behaviours which in turn influences whether the young person will experience an unplanned pregnancy. Similarly, Figure 1.1 also illustrates that community and household factors are important and need to be understood to ascertain its effect on young people's proximate determinants. For example, the ease of access to sexual and reproductive health services has implications for how young people respond to information regarding sexual and reproductive health. Issues around confidentiality, the behaviour of health care workers and distance to clinics could limit or prohibit young people's access to these services. This, in turn, influences their decision to engage in safe or unsafe sexual and reproductive health behaviours which determine whether they will experience an unplanned pregnancy.

The proposed determinants of childbearing focused on include factors detailed in Hallman's framework. The social factors influence young people's decision making with regards to engaging in safe sex practices. Similarly, coerced sex and early sexual debut and transactional sex are influenced by gender relations which Hallman classifies as a societal factor. This study explains that these unequal gender relations increase young females' risk of engaging in risky sexual behaviour. According to Figure 1.1, the behaviour of health care workers is classified as a community factor. This factor influences the sexual and reproductive health services offered to young people which in turn impacts on their decision to engage in risky sexual behaviour. Hallman identifies socio-economic status (analyzed as a measure of household wealth) and family structure as a household factor which influences young people's decision making. Lastly, factors such as educational achievements and aspirations and access to information are framed as individual proximate determinants. Hallman's framework explains that these factors directly influence and impact young people's decision to engage in risky sexual behaviour.

1.6 Organization of the study

The study is divided into five main chapters. The first chapter provides background information on childbearing. It also looks at the aims of the study, the methods used, theoretical framework and the data used in the study. The second chapter presents a review of existing literature on

trends and determinants of childbearing among young people under two broad themes namely, socio-demographic factors and socio-economic factors. Chapter three describes the dataset used in the study. It also describes the variables of interest and method of data analysis. The fourth chapter presents the levels of childbearing among young people in South Africa. More so, possible factors are identified as determinants of childbearing among young people. Chapter five concludes with a discussion on the findings of the study and recommendations for future research.

Chapter Two: Literature Review

2.1 Introduction

Early childbearing has far reaching consequences for young mothers. In order to develop interventions and formulate policies aimed at curbing the adolescent fertility rate, the context in which adolescent fertility occurs need to be understood. Although high levels of childbearing among young people are experienced globally, the context in which it occurs differs. Therefore, this chapter is aimed at reviewing existing literature which highlights possible determinants of childbearing among young people. The literature is presented under two broad themes: socio-demographic factors and socio-economic factors. Although this division is made, it needs to be understood that the factors reviewed are highly interrelated as there is no single, clear-cut determinant of childbearing among young people.

2.2 Socio-demographic factors

2.2.1 Age

Studies have found that the risk of childbearing among adolescents increases with age. In their study, Panday and colleagues (2009) explained that this is a national and international trend where the older a female gets the more likely she is to experience childbearing. This study indicated that in 2000, an estimated 822 000 pregnancies occurred to females aged 15-19 years in the United States, of which, approximately two thirds occurred to females aged 18-19 years. Similar results were found in Kenya and South Africa. Analyzing data from Kenya, Were (2007) reported that 17% of pregnancies occurred to females aged 15-16 years while 34% occurred to females aged 17-18 years. Similarly, Harrison (2008) revealed that 93% of adolescent fertility in South Africa can be attributed to births occurring to females aged 17-19 years. The ratio of females who report that they are sexually active to those who experience a pregnancy is 13:1 for females aged 15 years. This ratio changes to 7:1 for females aged 16 years and then to 3:1 for females aged 17 years. In response to this change in ratio, Harrison (2008) suggests that the

increased risk of experiencing childbearing is associated with increased levels of unprotected sex.

In providing further substantiation, Panday and colleagues (2009) explain that the higher levels of childbearing among older adolescents can be attributed to their lower levels of spontaneous and induced abortions. Factors such as increased hormonal levels and physical maturity also contribute to the higher levels of childbearing among older adolescents. In addition, Kirby (2002) postulates that social change also contributes to the higher levels of childbearing among older adolescents. Increased freedom and independence, increased peer pressure to have sex and changes in the understanding of sexual and reproductive health behaviours and norms are some of the social changes experienced by young people.

2.2.2 Population group and geographic areas

South Africa's adolescent fertility rates are reflective of the country's history of racial classification where inequalities in access to education, economic opportunities, health services and geographic space were faced on a daily basis. In 2001, Moultrie and McGrath (2007) reported that the fertility rates of Indian and White adolescents mirrored that of developed countries. For example, in 2001 the fertility rates for adolescents from the different population groups in South Africa were 14 births per 1000 White adolescent females, 22 births per 1000 Indian adolescent females, 60 births per 1000 Coloured adolescent females and 71 births per 1000 African adolescent females (Moultrie and McGrath, 2007).

In their review Eaton, Flisher and Aaro (2003) indicate that limited research has been done across geographical spaces - urban versus rural areas. After reviewing three papers, Eaton and colleagues (2003) suggested that young people belonging to rural communities are less informed about sexual and reproductive matters due to their limited access to media in comparison to their urban counterparts. The review also suggests that there were no significant differences among

young people living in rural and urban areas in terms of engaging in risky sexual behaviours such as number of partners and multiple, concurrent partners.

A report by the World Health Organization revealed that young people living in rural areas were found to be more likely to begin childbearing than those living in urban areas. It was reported that in developing countries, 24% of young people, living in rural areas, have experienced childbearing compared to 16% living in urban areas (McIntyre, 2006). In support of this position, a recent report indicates that the highest levels of childbearing among young people have been noted in the more rural provinces of Mpumalanga and Limpopo (Menendez et al., 2011). Similarly, when looking at sexual initiation and childbearing among KwaZulu-Natal adolescents, Manzini (2001) found that childbearing is higher among adolescents residing in urban areas whereas pregnancy is more prevalent among adolescents residing in rural areas. This implies that a larger amount of adolescents, who live in urban areas, actually give birth to their child.

Panday and colleagues (2009) suggest that rapid urbanization could be a possible reason for decreased adolescent fertility levels in rural areas and increased levels in urban areas. In South Africa, young people make up the most mobile sector of the population. These young people rapidly migrate to urban centers in search of work and educational opportunities (Panday et al., 2009). Similarly, McDevitt and colleagues (1996) postulated that different factors in urban and rural areas influence people's family size preferences, aspirations and the cost of fertility regulation. They explained that urban areas offer better education and job opportunities, access to better health facilities and easier access to contraception information and supplies (MeDevitt et al., 1996). These differences also account for the different levels of fertility seem among young people living in urban and rural areas.

2.2.3 Educational achievements and aspirations

In their study, Panday and colleagues (2009) identify access to education, especially for African youth and women as one of the main reasons for the inherent decrease in South African fertility

since the 1970s. Education is an important determinant of socio-economic success during adulthood, low fertility and basic human development (Lloyd and Blanc, 1996; Anderson, Case and Lam, 2001). Therefore, low educational achievements and aspirations can be seen as a possible determinant of childbearing among young people. Literature indicates that being enrolled in school is a protective factor against early sexual debut, risky sexual behaviour and unplanned childbearing. However, South Africa proves to be a unique case where being enrolled in school could possibly increase adolescents' risk of early sexual debut, risky sexual behaviour and experiencing unplanned childbearing. In their paper Grant and Hallman (2008) indicate that due to educational disruptions such as grade repetition, delayed school entry, high unemployment and periods of temporary withdrawal from school, large number of adolescents continue to remain enrolled in school well pass their puberty phase and into their late teens. This prolonged enrollment increases their risk of school disruptions due to childbearing as they proceed to higher grades. Furthering this argument, Marteleto, Lam and Ranchhod (2008) suggest that the likelihood of dropping out of school increases once a young female becomes sexually mature and engages in pre-marital sex.

In addition to becoming sexually active, adolescents' educational achievements and aspirations also influence their decision to engage in risky sexual behaviour. In their study, Scott and colleagues (2011) found that high educational aspirations and achievements and no substance use are negatively associated with engaging in risky sexual behaviour. Panday and colleagues (2009) explain that young females' risk of early childbearing decreases when there is some sense of attachment to and success at school. Similarly, Miller-Lewis, Wade and Lee (2008) indicate that various longitudinal studies have identified a relationship between low educational and vocational achievements and aspirations and an increased risk of childbearing among young people. They suggest that young females' who have high educational and career aspirations are more likely to abort a pregnancy than to carry it to term and give birth. Likewise, authors indicate that incentives such as high educational aspirations, academic achievement and school attachment deter young females from experiencing early childbearing (Kirby, 2002; Panday et al., 2009).

Using data from the 2001 survey, 'Transitions to Adulthood in the Context of AIDS in South Africa' conducted in KwaZulu-Natal, Grant and Hallman (2008) found that disruptions in the schooling career such as grade repetition and temporary withdrawal from school serves as a significant predictor of early childbearing. In their paper, Grant and Hallman (2008) indicate that an earlier study in Kenya yielded similar results where adolescent females who performed poorly in school were more likely to experience a pregnancy compared to those adolescents who performed better in school. Using the 2002, Cape Area Panel Study (CAPS), Marteleto, Lam and Ranchhod (2008) also found that adolescents who repeat grades are more likely to experience childbearing and not return to school after giving birth. It is important to note that some authors argue that the relationship between childbearing among young people and dropping out of school is not unidirectional. Lloyd and Mensch (1999) explain that instead of pregnancy, factors such as domestic demands, the lack of social and economic opportunities and gender inequalities in the education system result in poor academic performance and negatively influence the schooling experience of young females. These factors foster adverse environments which force young females into early motherhood (Lloyd and Mensch, 1999).

2.2.4 Behaviour of health care workers

The termination of specialized clinics and programs for adolescents in the late 1980's resulted in young people having to use clinics which cater to the general population. Various authors have suggested that the lack of adolescent-friendly clinics pose as a barrier to the access of sexual and reproductive health services by young people. In a study conducted in the Limpopo province, South Africa, Wood and Jewkes (2006) found that the behaviour and perceptions of health service providers limit adolescent's access to information regarding sexual and reproductive health and access to contraception. Many of the health service providers interviewed in the study indicated that sexual debut is occurring at younger ages, which is unacceptable and therefore they attempt to discourage such behaviour (Wood and Jewkes, 2006). The adolescents interviewed confirmed that their access to sexual and reproductive health services is limited by health service providers. They indicated that when visiting clinics, they are asked an array of 'funny questions' by the health service providers. The questions revolve around their choice of dressing, their decision to engage in sexual activities and whether their parents were aware of

their sexual status. The adolescents are scolded at, belittled, embarrassed and humiliated if they did not answer these questions (Wood and Jewkes, 2006).

The study also found that the information provided by the health service workers were limited and vague and at times, incorrect. For example, many adolescents and health service workers stated that the use of contraception will result in illness and infertility (Wood and Jewkes, 2006). The issue of confidentiality was another problem highlighted by Wood and Jewkes (2006) as the health service providers were usually community members. In the interviews, adolescents indicated that they would limit their clinic visits out of fear that their parents would find out about their sexual status from the health service providers – who were usually neighbours. Due to the lack of assistance from health service providers, the study found that adolescents gained most information from friends and the media. This results in incorrect information being recycled between friends. For example, the adolescents interviewed indicated that it was fine to share oral contraceptives (Wood and Jewkes, 2006).

Camlin, Garenne and Moultrie (2004) found similar results in their study which highlighted that contraception use among adolescents was low however adolescent fertility was high. The study suggests that supply-related barriers can be attributed to the increase in childbearing among young people. Supply-related barriers refer to young people having limited access to contraception, sexual and reproductive health information and their perceived risk of pregnancy (Camlin, Garenne and Moultrie, 2004). In addition, health service providers' bias towards certain methods of contraception and their negative attitude towards early sexual debut also serve as supply-related barriers. Thus the study argues for adolescent-friendly services in order to meet the currently unmet need of adolescent sexuality.

A 2001 study by Dickson-Tetteh, Pettifor and Moleko provides an introduction into South Africa's, National Adolescent-Friendly Clinic Initiative (NAFCI). The study covers in detail, NAFCI's description, objectives and affiliated organizations. However, more importantly,

Dickson-Tetteh, Pettifor and Moleko (2001) argue that South Africa's public health sector is failing the country's young people as it is unable to meet their sexual and reproductive health needs. The study highlights that young South African's have limited sexual and reproductive health knowledge and have limited access to health services. Dickson-Tetteh, Pettifor and Moleko (2001) explain that these services are either physically inaccessible to youth or their service times (working hours) conflict with school and therefore young people are unable to access these services. Moreover and similar to Wood and Jewkes (2006) the study also highlights that the attitudes of health service providers are a barrier to access as they are judgmental and hostile at times and confidentiality and empathy are not always guaranteed. Elaborating on the importance of adolescent-friendly services, Dickson-Tetteh, Pettifor and Moleko (2001) state that these services can help promote healthy sexual and reproductive health, shape positive sexual behaviours and prevent an array of adolescent health problems. .

2.2.5 Access to information

The topic of sex has been and still is taboo in many societies and thus very little, if any information is gained from parents, teachers and as discussed above, health care providers. These sentiments were highlighted by Preston-Whyte (1994) in an earlier study where she attributed the increasing childbearing among young people in South Africa partly to the lack of communication about sexuality between Black parents and teachers and young and/or unmarried females. Similar to more recent studies, Preston-Whyte (1994) found that sex and contraception were not discussed with young and/or unmarried females out of fear that it would affect their fertility and encourage sexual experimentation.

In a later study conducted in the Niger Delta Region of Nigeria, Okonta (2007) found that parents do not speak freely to their children about contraception and safe sex practices. Mothers of pregnant adolescents indicated that when they suspected that their adolescent daughter was sexually active they advised them to stay away from men as they could possibly fall pregnant. In the same study it was also found that parents provide incorrect information to young people as

79% of the parents interviewed indicated that contraceptives should not be used by sexually active adolescents as it promotes promiscuity, infertility and death. Similar to the study conducted by Wood and Jewkes (2006), Okonta (2007) found that the electronic media, print, peers and school education were the main sources of information for adolescents. The study highlights the importance of adolescent-friendly services emphasizing that these clinics are important because they create an environment that would attract and service young people (Okonta, 2007). In the study, Okonta (2007) reports that in the Niger Delta Region, 16% of 240 reproductive health facilities had the space for adolescent-friendly services and of these, only half actually offered such services (Okonta, 2007).

Similarly, a study conducted in the Limpopo province, South Africa, suggests that one of the reasons for the province's high adolescent fertility rate is the lack of correct information regarding safe sexual practices among young people (Limpopo Provincial Government, 2012). In the study, the adolescents were asked a battery of questions aimed at assessing the correctness of their views on pregnancy and contraception use. The results revealed that many of the adolescents had limited knowledge on issues surrounding pregnancy and contraception use (Limpopo Provincial Government, 2012:70). For example, the study found that 11% of the respondents were aware that contraceptives can be used by young females. However, the rest of the respondents indicated that contraceptives cause weight gain, pimples and complications when trying to conceive (Limpopo Provincial Government, 2012).

A study conducted in Eritrea yielded similar results. Factors such as attitudes, beliefs, myths and social norms were identified as barriers to safe sex which required more attention compared to the lack of contraception (Woldemiceal, 2005). Woldemiceal (2005) explains that this is the case because issues of sexuality are deemed socially and culturally unacceptable and are not discussed with young people. The issue of sexuality and adolescent childbearing outside of wedlock is also viewed as unacceptable. In these situations, pregnant adolescents and young mothers are considered social outcasts and marginalized. However, contrary to other literature reviewed, Woldemiceal (2005) found that conversations about sexuality among friends are also not

common. This is problematic as young people are left without information on safe sexual practices thus increasing their risk of contracting HIV and STIs and experiencing unplanned childbearing. Furthermore, Hallman (2005) suggests that young people belonging to low socio-economic status households are also less likely to engage in discussions centered on safe sexual practices

Using data from Uganda, Sekiwunga and Whyte (2009) examined adolescents' opinions on parent-child relationships and childbearing among young people. In the study, young females indicated that their parents and guardians did not furnish them with information regarding safe sexual practices. School teachers and local leaders had similar grievances. They stated that parents were too shy to address such issues with their adolescent children. This is the case because traditionally, modesty and avoidance of discussions about sexuality between parent and child was encouraged (Sekiwunga and Whyte, 2009). Sekiwunga and Whyte (2009) highlighted conflicting views from parents and teachers. The parents indicated that such issues should be addressed at school however teachers felt that adolescent sexuality should be addressed at home as there is no time in the teaching syllabus to focus on these issues. The teachers and local leaders who participated in the study also highlighted that the government was not doing enough to address safe sexual and reproductive health behaviours and options among young people (Sekiwunga and Whyte, 2009).

Zwang and Garenne (2008) found that among young people in Agincourt, South Africa, mass media forms one of the main sources of information on sexual and reproductive health. In the study, young males and females indicated that their increase in sexual activity is related to the display of various sexual behaviours seen on television programs. Zwang and Garenne (2008), explained that these young people would get aroused and interested in experimenting in what they perceived as 'modern behaviour', as observed on talk-shows, films, soap operas and health education and family planning campaigns (Zwang and Garenne, 2008). The study also highlighted that young people are influenced by their peers and aim to behave in a similar manner.

2.2.6 Cultural beliefs and contraception use

Literature indicates that cultural beliefs, practices and myths about modern contraception also pose a barrier to use. Due to the lack of correct information, various myths about the use of modern contraception have become common knowledge among many South Africans. This is that case for young people, especially those living in less developed areas of the country. A study conducted in the Limpopo Province, South Africa, found that myths and traditional beliefs regarding modern contraception are still held to be true (Wood and Jewkes, 2006). The study suggests that these myths have become socially accepted to the extent that preachers in local African Churches preach about the dangers of using modern contraception, stating that it would "damage the egg" (Wood and Jewkes, 2006:111). Many of the nurses interviewed in the study showed an inclination towards such beliefs. They highlighted that they advise adolescents not to use modern contraception as it could result in infertility. Instead of the use of modern contraception, the use of traditional contraception methods is promoted (Wood and Jewkes, 2006).

In an earlier study, Varga (1997) highlights the importance of acknowledging that risky sexual behaviour is a rational choice among adolescents who expect intimacy, romance, trust and economic stability from such behaviour. The study argues that decisions' surrounding risky sexual behaviours such as multiple sexual partners and unprotected sex occur within a cultural framework which condition adolescent's beliefs and decision-making. In the study on adolescents in KwaZulu-Natal, South Africa, Varga (1997) found that the level of condom use is minimal. Male adolescents indicated that they associate condom use with the risk of contracting STIs and HIV and not protection against pregnancy therefore, they did not use them. These male adolescents also reported that it took control away from them (Varga, 1997). Varga (1997) reports that female adolescents do not request the use of condoms or any other contraceptive method out of fear of physical violence and coerced sex. This is because the request for condoms created issues of mistrust. In response to these results, Varga (1997) argues that the socio-cultural perspective encourages traditional gendered roles. These roles expect females to be submissive and obsequious and males, forthright and assertive.

A later study looking at condom use and college students revealed differing results. In their study on college students in Durban, South Africa, Maharaj and Cleland (2006) found that young people's view on condom use has changed. The study found that condoms have become an acceptable norm among college students however it was noted that sex with a condom was not enjoyed as much. Approximately 87% of males and 89% of females have indicated that condoms have become a part of the sexual experience (Maharaj and Cleland, 2006). The respondents also indicated that sex without a condom was dangerous. Condoms were reported to be easily accessible on campus however, more difficult to access when students returned to rural areas during the vacation. The study noted that females were still seen as being responsible for preventing pregnancy (Maharaj and Cleland, 2006). Many young females were aware of the importance of using a dual method of protection however, confessed that such a method is hardly used. Maharaj and Cleland (2006) found that within 'equal relationships' females had the power to decide whether a condom was used. However, within 'abusive relationships' men were reported to have greater control over condom use negotiations. Condoms were reported as the preferred type of contraception. Non-barrier methods such as injectable hormones were not commonly used out of fear of side-effects such as weight gain and mood swings (Maharaj and Cleland, 2006). Although the study participants indicated that condoms have become a part of the sexual experience, Maharaj and Cleland (1997) found that condom use was not consistent. The study revealed that 24% of males and 28% of females had reported that they always use a condom during sexual encounters.

Zwang and Garenne (2008) disagree with the notion that contraception use has increased among young people. They argue that contraception use has increased among women who already have children and married women, not adolescents. They postulate four reasons for this claim: firstly, they indicate that the lack of adolescent friendly family planning clinics and programs deter young people from accessing these services. Young people's needs are not addressed in family planning interventions and in some facilities they are stigmatized and poorly assisted, if not refused help. Secondly, sexual and reproductive health information is not openly communicated by parents and teachers to young people. Thirdly, young people are often very young at sexual onset and lack sufficient information about the risks associated with their behaviour. Lastly,

resulting from peer pressure and unequal gender relations, young females feel that they cannot refuse sexual intercourse or suggest the use of contraceptives (Zwang and Garenne, 2008).

2.2.7 Early childbearing and marriage

According to Palamuleni, Kalule-Sabiti and Makiwane (2007) marriage is an important determinant of childbearing. Traditionally, marriage signals the onset of a woman's exposure to the risk of childbearing, it is also used to determine the pace and length of a woman's reproductive activity. They indicate that in many traditional societies marriage is universal and occurs at early ages however in South Africa this has changed. Marriage is no longer universal and if it does happen, it is usually delayed. Palamuleni, Kalule-Sabiti and Makiwane (2007) estimate the average age of marriage in South Africa is 29 years. Using qualitative data from Agincourt, South Africa, Zwang and Garenne (2008) highlight that young men and women prefer to postpone marriage and remain single for several years due to economic reasons. They explain that the postponement of marriage is indicative of higher educational aspirations and opportunities where females choose to become financially independent before marrying. This has positive outcomes for young people and the country as a whole as it means that more young people will be completing school and becoming active members of the labour market (Zwang and Garenne, 2008). Palamuleni, Kalule-Sabiti and Makiwane (2007) suggest that almost half of all women in their reproductive ages do not marry. However, they highlight that although early marriage is rare in South Africa, childbearing among young people is a common occurrence.

African tradition promotes childbearing among young people as it proves the female's fertility which in turn increases her bride price (*lobola*). Many African families have realized the importance of an education and therefore early childbearing is not promoted to a large extent in contemporary society but this is not to say that it is no longer practiced. In their study conducted in South Africa, Kaufman, de Wet and Stadler (2001) found that although adolescent fertility is frowned upon and reprimanded, it is ultimately welcomed. This is the case as it not only proves the young female's fertility but also increases her bride price. Wood and Jewkes (2006) found similarly results in their study conducted on adolescents in Limpopo, South Africa. The study

found that many young females expressed the importance of proving their fertility as it was a way of attaining status and acceptance as a women in their community. It was also highlighted that some cultural institutions express explicit public acceptance of early childbearing. In some cases, grandmothers motivated for such behaviour as they 'require a baby to keep them company' (Wood and Jewkes, 2006). In addition, the study indicates that males also encourage childbearing by their young female partners as it also proves their fertility (Wood and Jewkes, 2006). Wood and Jewkes (2006) noted that in some cases, coerced and violent behaviours were used. The female participants reported that their clinic cards were torn up and destroyed by their male partners in an attempt to prevent the use of contraception.

Similarly, Woldemicael (2005) found that in Eritrea, customs which promote and force early marriage have been weakened but still exist. These customs continue to exist because of the desire to continue the man's lineage, prestige and economic support in old age. In honouring these customs, young females are encouraged to marry and bear children at early ages. A study conducted in the Amassoma Community of Southern Ijaw yielded similar results. Maliki (2012) highlights that adolescent fertility is perceived as a blessing because it proves the female's fertility. The study highlights that this is the case because culturally, females are regarded as instruments of procreation. Similar results were also found in a study conducted by Camlin, Garenne and Moultrie (2004) in KwaZulu-Natal, South Africa.

In a review of childbearing among young people in developing countries, Singh (1998) notes that in some communities, courtship as a form of 'trial marriage' is encouraged. The courtship is then formalized into a union once fecundity is proved. However, in other communities, adolescent or out-of-wedlock childbearing is not tolerated and young mothers are marginalized therefore marriage is forced. The study also revealed that unmarried, young mothers are at a greater risk of experiencing health complications as compared to married, young mothers. Similar results were found by Grover and Sandhu (2009) when looking at the physiological and medical outcomes of childbearing among young people. In a study conducted in the Niger Delta region of Nigeria, Okonta (2007) found a decline in rates of early marriage. Okonta (2007) argues that the decline

in early marriages is welcome but is not ideal because an early age of sexual debut increases the risk of unintended childbearing among young people. Looking at orphans in sub-Saharan Africa, Palermo and Peterman (2009) found that orphan status is associated with early sexual debut but not with early marriage and childbearing among young people.

Early marriage was promoted as it was believed to restrict promiscuity among young females. Providing further substantiation, Palamuleni, Kalule-Sabiti and Makiwane (2007) indicate that traditionally, women who married late had, on average, a decreased risk of falling pregnant. This meant that they would experience childbearing at late ages and have a lower fertility. However, in current times this is no longer the case. In their study Palamuleni, Kalule-Sabiti and Makiwane (2007) found that in South Africa, marriage occurs at older ages however motherhood starts at early ages. Attempting to provide some substantiation for the country's increased adolescent fertility, Palamuleni, Kalule-Sabiti and Makiwane (2007) suggest that in the past, preserving one's virginity was an important practice among African females. Therefore, out-of-wedlock childbearing was a social embarrassment for the female and her family. However, the modernization of society and merging of cultures have caused this notion of the 'importance of preserving one's virginity' to change. As a result, South Africa is currently experiencing early ages of motherhood and late ages of marriage.

Traditional practices play an integral role in determining age of marriage and marriage practices. Many studies have identified a link between traditional forced marriage practices and risky sexual behaviour. Reviewing literature on member states of the Southern African Development Community, Rembe and colleagues (2011) indicate that contrary to recent beliefs, traditional forced marriage practices are gaining popularity and are on the rise. The article provides a review of practices of forced marriage in Malawi, Zimbabwe, Tanzania and South Africa. *Ukuthwala* is highlighted as a common practice in South Africa (Rembe et al., 2011). It is defined as a romantic procedure which is practiced when there is an obstacle to the marriage. The process of Ukuthwala is described as follows: a young female is abducted by the husband-to-be and his family, usually whilst she is carrying out domestic chores and kept in his home town. On the day

of the abduction or latest, the next day, the young female's family is informed of the abduction and that the girl is safe. A friendly relationship is then established between the families during which *lobola* is discussed (Rembe et al., 2011). The young female is then referred to as a young wife, which concludes the forced marriage procedure of *Ukuthwala*. This practice is common among Xhosa communities located in Transkei in the Eastern Cape province of South Africa (Rembe et al., 2011). The study also found that similar practices were common in Zimbabwe and Malawi where parents would arrange marriages between young females and older men, without the female's knowledge. The objective behind this marriage procedure is to gain wealth – money, livestock and goods in the form of dowry from the husband. In such cases the study reports that the male's wealth is an important factor, not his potency (Rembe et al., 2011).

The above descriptions of traditional forced early marriages highlight that these practices infringe on females' rights. Furthermore, Rembe and colleagues (2011) reveal that these practices occur to young females aged between 12-15 years. This interrupts their schooling and in cases where the young female is allowed to continue schooling, early childbearing often serves as a disruption (Rembe et al., 2011). Young females' subjected to traditional forced marriage practices are deprived of a complete education and the opportunity to become a member of the labour market. This is the case as they usually have to take up the responsibility of domestic chores and take care of their new family (Rembe et al., 2011). The study also found a correlation between age and maternal mortality, where young females are at an increased risk of mortality during their pregnancy. Placing these young females at further disadvantage is the fact that most of these men are older and have been infected with HIV from previous sexual partners (Rembe et al., 2011). Rembe and colleagues (2011) suggest that the age disparities, differentials in socio-economic status and the inherent gender-inequality of the process eliminate the possibility of using a method of contraception. Thus, these young females are forced to bear children with older, HIV infected men. The negative outcomes of such risky sexual behaviours are endless.

Traditional forced marriage is a practice which is not unique to African countries. In their paper, Hossain and Turner (2001) describe how young females living in Britain are 'tricked' into returning to their country of origin. Once returned, they are held against their will and forced into marriage with a local. The paper reported that an estimated 1000 females are abducted every year by their families and taken to their country of origin and forced into an arranged marriage (Hossain and Turner, 2001). The majority of these females follow the Hindu, Sikh or Muslim religion and are from Pakistan, Bangladesh and India (Hossain and Turner, 2001).

In their study, Rembe and colleagues (2011) highlight the negative physical, social and psychological outcomes faced by abducted young females. They state that these young females are usually forced to bear children at a young age. Physically, the young female is not fully developed and therefore her risk of maternal mortality increases during childbearing (Rembe et al., 2011). The young female also faces social isolation. She is often married to an older man and becomes one of a number of wives. The young female is then treated as a slave by the older wives where she is tasked with the majority of domestic chores (Rembe et at., 2011). Psychologically, the young female is unable to cope with the social pressure as well as assume responsibility for the care of her new family. Therefore, it is evident that traditionally marriages are a possible determinant of childbearing among young people, with the worse possible outcomes (Rembe et al., 2011).

2.2.8 Family Structure

Literature indicates that family structure is an important factor which indirectly influences risky sexual behaviour among young people. In their paper Lloyd and Desai (1992) highlight the importance of the presence of parents. They state that young people depend on their parents for care, economic support, stability and socialization. Lloyd and Desai (1992) argue that the ideal conditions for young people to grow up in is one in which their parents and/or close family members are present and where young people do not have to compete for parental support and attention with many dependent siblings.

The HIV/AIDS pandemic South Africa is currently experiencing has caused major disruptions in the family structure. Speaking at the opening of the 13th International Conference on AIDS and STIs in Africa, Lewis (2003) portrays the reality faced in many African and South African households. Lewis (2003) describes how, when addressing a small community in Zambia, the crowd consisted of a few young mothers with their babies, in front of them were a large number of children playing, a handful of older men and making up majority of the crowd were grandmothers. Missing from the crowd was the entire middle generation. Lewis (2003) attributes their deaths to the HIV/AIDS pandemic and suggests that grandmothers are now left to care for the orphaned children. The loss of this important middle generation results in traumatized young people who live unstable lives. These young people are robbed not only of their parents but also their childhood and future. Most importantly, Lewis (2003) argues that these situations in Uganda and Zambia mirror the reality of many African countries.

Similarly, Case and Ardington (2006) highlight that an entire generation of young people have lost parents, caregivers and other loved ones to the HIV/AIDS pandemic. Investigating further into this situation, the study explains that since 1990, sub-Saharan Africa has experienced an increase in the rates of orphanhood. UNAIDS estimated that in 2004, the region was home to 43 million orphaned children under the age of 18 years, of which more than 12 million were orphaned due to HIV/AIDS (Case and Ardington, 2006). The study reports that 13% of all South African children have been orphaned. This equates to 2.3 million children, aged 18 years and younger who have lost either one or both parents. In light of this increase in orphanhood, Case and Ardington (2006) investigate the effect that the loss of a parent has on the educational attainment and school enrollment of young people. Using longitudinal data from the demographic surveillance area of Africa Centre, Case and Ardington (2006) found that the loss of a mother has no effect on the socio-economic status of the household. However, an effect has been noted with the loss of a father. The study suggests that the loss of a father is associated with the worst schooling outcomes for the child as a father's death affects the income brought into the household. An effect on schooling for maternal orphans was also noted but this is not related to socio-economic status.

Lloyd and Desai (1992) found similar results in their study on children's living arrangements in developing countries. The study highlights that the absence of a father lowers the young person's economic status and could increase the likelihood of experiencing poverty. On the other hand, the absence of a mother places the young person in a vulnerable position (Lloyd and Desai, 1992). Literature indicates that young people living in female-headed households are at an advantage compared to their counterparts. Female-headed households are more likely to use their resources in ways which would benefit young people. For example they would purchase foods which have a higher nutritional value and a significantly less amount would be spent on goods such as alcohol and cigarettes (Lloyd and Desai, 1992; Lloyd and Blanc, 1996; Evans and Miguel, 2007). In their paper, Case Paxson and Ableidinger (2004) suggest that the young person's relationship to the household head influences the care and investments made in the individual. According to this approach, the type of care received by a young person depends on how closely they are related to the household head. This has negative implications for fostered children (Case, Paxson and Ableidinger, 2004). South African societies have strong family and community networks which serve as a buffer and absorb the responsibilities of caring for young orphans. However, this could result in negative implications for young people who have been fostered or live with extended family members.

In South African, the family structure has been influenced by the migrant labour system during the apartheid era. Men were required to leave their families and work in the mines located in the city. The Group Areas Act of the time prohibited the relocation of the entire family to the city thus depriving many households of fathers and husbands. Post-apartheid policy changes focused on redressing these inequalities however the effects of the migrant labour system continue to be experienced. This can be seen in the low rates of co-residence between father and children (Makiwane, 2010a). The absence of males resulted in the emergence of many female-headed households which received remittances from males in the city. However, these remittances eventually stopped as the males established new networks in the city which saw them becoming a part of new families (Makiwane, 2010a). Makiwane (2010a) suggests that this restructuring of the family creates an unstable environment for young people. Similarly, in a study using data from demographic surveillance surveys in KwaZulu-Natal, South Africa, Hosegood, Benzler and

Solarsh (2005) found that men are more likely to migrate across provincial boundaries and women and children are more likely to migrate locally. However, more importantly the study found that children were recognized as staying in two households (Hosegood, Benzler and Solarsh, 2005). Resulting from the labour migration system, which prohibited adults from co-residing, were high rates of multiple partners and marital instability. These situations fostered complex social arrangements and complex patterns of child mobility for young people. The study also found that one third of all households had a child living in it where neither adult was a biological parent (Hosegood, Benzler and Solarsh, 2005).

Traditionally, younger generations support older generations however this has been reversed as many South African's face high levels of unemployment and HIV/AIDS. Makiwane (2010a) explains that early childbearing is common when young people do not leave the house after they have completed school. As a result, the reality in many households is that as many as three generations are dependent on the older generation. This is usually the grandparent whose only income is the old age pension. Makiwane (2010a) also highlights that the child dependency ratio is high in low income households. Looking at older people and care giving, Makiwane, Schneider and Gopane (2004) found that in Mpumalanga, South Africa, 46% of people aged 60 years and older give care to young people aged 6-18 years. Women were also more likely to be the care givers with 51% of older females reported giving care compared to 33% of older males. Only 2% reported receiving payment for the care with 96% receiving no payment and 2% receiving payment sometimes. Lastly the study found that the majority of the care was given in the household thus further reinforcing the notion that older household members – grandmothers, give care to their children and grandchildren (Makiwane, Schneider and Gopane, 2004).

Using Demographic and Household Surveys conducted in 24 sub-Saharan African countries, Zimmer and Dayton (2005) also found that the majority of the regions prime aged adults have died due to the HIV pandemic. As a result, the study identified grandparents as natural caregivers of grandchildren where about 46% of the sample reported living with a grandchild. Furthermore, it was also noted that almost 14% of older adults in the sample live with no adult children but at

least one grandchild. Similar to other studies, Zimmer and Dayton (2005) also found that women (grandmothers) are more likely to be care givers living in three generational households compared to males (grandfathers) who are more likely to be living with a child. These three generational households include grandchildren and children-in-law. The study also noted that besides death, another reason for the absence of parents in the household is because they are living and working elsewhere (Zimmer and Dayton, 2005).

The above literature indicates the importance of the presence of both parents in the household. It also highlights how the absence of either parent influences the family structure and thus the well-being and stability of young people. Grandmothers are identified as the main caregiver to young people in households where there are no parents. However, due to the generation gap, grandparents are unable to provide optimal care for young people in terms of meeting their developmental needs. For example, Makiwane (2010a) describes how, due to the social distance between generations, grandparents and grandchildren value different things. Older people may see value in grooming young females into doing domestic chores such as cooking and cleaning while the females may view an education as being more important. This difference in values and unstable family structure provides a context in which risky sexual behaviour is more likely to occur.

2.3 Socio-economic factors

2.3.1 The child support grant

During the apartheid era the State Maintenance Grant was available to single parents, theoretically of all race groups but due to poor implementation, mostly White and Coloured parents received the grant. On recommendation from the Lund Committee, the State Maintenance Grant was implemented as the Child Support Grant. This grant made it possible for poor children from all family types to be eligible for the grant. The implementation of the Child Support Grant also saw the value of the grant increase from R70 to R250 per month for the period of 2009-2011 (Makiwane, 2010b).

The introduction of the government grant has caused a great deal of debate. Many arguments center on the grant being instrumental in increasing the country's adolescent fertility rate. Using South African data, Makiwane and Udjo (2006) conducted an investigation into this matter. The investigation revealed that there is no association between the Child Support Grant and South Africa's increased adolescent fertility (Makiwane and Udjo, 2006). The study found that the increase in adolescent fertility is in line with the country's political changes. Furthermore, they report that the increase being experienced predates the introduction of the Child Support Grant. Secondly, they found that the majority of people benefiting from the grant were older people aged 30 years and above. The fertility of this older cohort has been declining but they benefit most from the grant as they care for their grandchildren. And lastly, the study found that an increase in adolescent fertility has occurred across all characteristics of people, including those that do not qualify for the grant (Makiwane and Udjo, 2006).

Similar to his earlier publication, Makiwane (2010b) suggests that there is no association between the introduction of the Child Support Grant and increased adolescent fertility. Using data from the Department of Social Development, the study found that there is a notable increase in the number of grant recipients between 1999 and 2005. This increase has been attributed to better coverage and implementation of the grant. Similar to the findings in the earlier study, Makiwane (2010b) found that majority of the grant recipients are older than 30 years. This is in keeping with nation-wide trends where grandparents are caregivers of grandchildren. Furthermore, the study found that young people contributed approximately 15% to the total fertility rate however fewer than 3% of young people received the grant from 1999. Makiwane (2010b) also indicates that there was an increase in the number of abortions conducted in public institutions since 1997. Therefore, presenting the argument that if young people were falling pregnant in order to receive the Child Support Grant then a larger percentage of young people should be recipients of the grant and there should be a decrease in the number of abortions per year. Makiwane (2010b) concludes by suggesting that there is a problem with service delivery as young people have unmet, sexual and reproductive health needs. More so, in South Africa, almost all childbearing among young people occur out of a recognized union. The high rate of

sexual activity and low prevalence of marriage has resulted in high levels of unplanned childbearing among young people (Makiwane, 2010b).

2.3.2 Coerced sex and early sexual debut

Although in the process of development, many South African communities remain patriarchal. In such communities, gender inequality and the objectification of females remain a challenge to many women. Coerced sex has been identified as a determinant of risky sexual behaviour with the negative outcome of childbearing. Studies also suggest that a young person's socio-economic status influences events of coerced and transactional sex. Providing further substantiation, Hallman (2005) found that risky sexual behaviour is associated with socio-economic status. The study explains that living in poor households increases young females' odds of experiencing events of transactional and coerced sex and non-consensual early sexual debut (Hallman, 2005).

In a report published by the Population Council, Heise, Moore and Toubia (1995) review literature on coerced sex from a number of global studies conducted during the period of 1982 to 1994. The study identified coerced sex as a determinant of unplanned childbearing among young people. Events of attempted rape, rape, physical assault by older men, verbal harassment and sexual aggression have been reported by young females, of which some had these experiences before the age of twelve. Harrison, Cleland and Frohlich (2008) suggest that gender inequality is one of the main reasons for the high levels of sexual violence. In support, Hallman (2005) argues that gender-based social and economic inequalities have resulted in an increase in events of coerced sex. This is because gender inequality among couples reduces the females' negotiating power, making it difficult for her to negotiate safe sexual practices.

A study conducted by Wood and Jewkes (1997) on pregnant adolescents in a township in South Africa highlighted gender inequality as a determinant of early childbearing. The study found that sexuality continues to be a male dominated forum. In the township, female sexuality is not encouraged and both partners are aware of the gender inequality in the relationship. Similar to studies around that time, Wood and Jewkes (1997) noted that the male in the relationship

determines the timing and venue of sexual occurrences and whether protection will be used. Compounding the inherent gender inequality are reports of young females being unaware of exactly how sexual intercourse occurs. This increases young females' vulnerability as the study reveals that males refuse to explain the process of intercourse to females. Wood and Jewkes (1997) explain that male adolescents use this vulnerability to their benefit by forcing young females into conducting sexual acts according to their (the males) understanding of 'normal sexual behaviour'. The study also found that young males employ violent strategies from the start of the relationship and reinforce their position by beating their female partners if they resists. Wood and Jewkes (1997) suggest that physical violence has become a common act in some South African societies. Young females perceive the violence as an act of 'showing love' and reassure each other that every female experiences this behaviour (Wood and Jewkes, 1997).

Similarly, when looking at adolescents in KwaZulu-Natal, Varga (1997) found that gender-based inequality and sexual violence are a norm in South African societies. Varga (1997) explains that these situations have become a norm because they occur between people who are familiar to each other. The study found that there is a lack of communication between young couples. This is because young females' fear physical violence and coerced sexual encounters if they attempt to discuss important issues like condom use, STI and HIV contraction and unplanned childbearing (Varga, 1997). Furthermore, gender-based inequality was a major theme identified in the study. It was noted that males decide when sex occurs and whether protection is used. Male adolescents also indicated that sex was merely a means of having fun and enjoying each other and it did not mean commitment (Varga, 1997). Multiple sexual partners is another risky sexual behaviour practiced by young males. The study suggests that engaging with multiple sexual partners is a means of establishing power and social status. According to Varga (1997) in traditional African societies, men were encouraged to have multiple sexual partners as it demonstrated their masculinity. On the other hand, as discussed earlier, young females were expected to behave in a submissive manner. This means that they were to engage in monogamous relationships and not be sexually assertive. Within these relationships, young females indicated that their refusal of sex resulted in physical violence. They explain that they would be coerced into sexual encounters therefore they agreed to it from the onset (Varga, 1997).

In their review of existing literature on adolescents and sexual behaviour, Eaton, Flisher and Aaro (2003) also reveal that adolescent females remain in violent relationships out of fear of physical violence. In addition, contraception use in these relationships is low as the request for the use of a male condom is seen as an indication of infidelity. Wood and Jewkes (1997) also found similar results where it was noted that clinic cards were torn up to prevent access to contraception. In addition, adolescent females were gang-raped as punishment if they were suspected of or caught cheating on their male partners. However, on the contrary, males are 'allowed' to have multiple partners (Wood and Jewkes, 1997).

Coerced and early sexual debut can also be associated with childbearing among young people. Various authors have identified a link between early sexual debut and risky sexual behaviour. Thurman and colleagues (2006) report that early sexual debut among adolescents is associated with decreased contraception use, transactional sex, an increase in the number of lifetime partners, frequent acts of intercourse and an increased risk of HIV and STI contraction and unplanned childbearing. Similarly, Moore and colleagues (2007) found that in Burkina Faso, Ghana and Malawi, the younger the age of the female, the more likely the first sexual encounter was coerced. In some cases, young females were raped but in most cases they agreed to have sex after some protest. The study explains that if they did not agree to have sex, they would be forced and eventually physically abused, therefore they passively accept (Moore et al., 2007).

Maharaj and Munthree (2007) found similar results when looking at young females aged 14-24 years in KwaZulu-Natal. The study found high levels of coerced sexual debut. Almost 60% of young females, who had been coerced during their first sexual encounter, had experienced a pregnancy (Maharaj and Munthree, 2007). The study also found that young females who had experienced coerced sexual debut were more likely to experience pregnancy at younger ages compared to those who had not experienced coerced sexual debut (Maharaj and Munthree, 2007). In the study, Maharaj and Munthree (2007) highlight gender-based inequality as a possible determinant of early childbearing. The study explains that gender-based inequality reduces young females' safe-sex negotiating power which increases their risk of experiencing

early childbearing. This was especially the case with older men. The study suggests that the nature of coerced sexual relations reduces or eliminates the chances of using a method of contraception thus increasing young females' risk of engaging in risky sexual behaviour.

In a review of existing literature on adolescent sexual and reproductive health in the Niger Delta Region, Okonta (2007) revealed that the majority of young females have experienced early sexual debut. The study found that the conditions under which early sexual debut occur are horrible. Okonta (2007) explains that young females who experience sexual debut are drugged, coerced, deceived or raped. These conditions result in low or non-existent contraception use. Early sexual debut was also found to be a common occurrence in a study using the 1999 survey 'Transition to Adulthood in the Context of AIDS in South Africa'. The study reported that of the 1695 young females who participated in the survey, the mean age at sexual debut was 16 years – the ages of participants ranged from 10-21 years (Manzini, 2001). Similar to the study conducted by Moore and colleagues (2007), Manzini (2001) found that the younger the age at sexual debut the more likely the female was raped or forced by an older man. When engaging sexually with older men, young females are at an increased risk of contracting HIV and STIs. This situation reduces young females' safe sex negotiating power and as a result their likelihood of using a method of contraception decreases (Manzini, 2001). Similar to other studies, Manzini (2001) also noted that young females fear physical abused and therefore remain in violent, abusive relationship. Sexual coercion results in young people engaging in risky sexual behaviour which increases their risk of experiencing unplanned childbearing. As a result, coercive sexual behaviour is identified as a possible determinant of early childbearing.

2.3.3 Transactional sex

In light of the recent economic recession, attention needs to be focused on transactional sex as a determinant of childbearing among young females. The period of adolescence is characterized by the need to experiment sexually, the need for material possessions, increased peer pressure and limited economic resources (Kaufman and Stavrou, 2004). In South Africa, where poverty is a major social issue, young people grow up in a context of unemployment and social and familial

disruptions. These familial disruptions result from the country's entrenched migrant labour system and widespread social and economic inequality (Harrison, Cleland and Frohlich, 2008). As a result, transactional sex has become a means of accessing resources for young people. In support of this argument, Eaton and colleagues (2003) identified poverty as a reason for the commodification of sex. Transactional sex is a major cause for concern as it increases young females' vulnerability during sexual intercourse. Various studies suggest that transactional sex places young females at a higher risk of contracting HIV and STIs and experiencing unplanned childbearing (see Kaufman and Stavrou, 2004; Thurman et al., 2006; Moore, Biddlecom and Zulu, 2007; Harrison, Cleland and Frohlich, 2008). Studies have identified school fees, uniforms and text books, transport, clothing, cellphones and airtime and household survival groceries as items which are exchanged for sex (Thurman et al., 2006; Moore, Biddlecom and Zulu, 2007).

In a study conducted in four sub-Saharan African countries, Moore, Biddlecom and Zulu (2007) found that three-fourths of young females aged 12-19 years were sexually active and have had sex in exchange for money or material objects. More specifically, the study found that the older the female, the more likely she is to engage in transactional sex. This was also the case in Malawi and Ghana where 80% of young females aged 18-19 years had reported having sex in exchange for material objects or money in the twelve months prior to the study. Contrary to other studies, Moore, Biddlecom and Zulu (2007) found that, in all four of the African countries – Uganda, Ghana, Malawi and Burkina Faso, engaging in transactional sex in the 12 months prior to the study was not significantly associated with condom use during the last sexual encounter.

Harrison, Cleland and Frohlich (2008) suggest that transactional sex occurs between couples who are around the same age however in most cases, transactional sex occurs between young females and older men. Similarly, in their KwaZulu-Natal study, Kaufman and Stavrou (2004) found that the sugar daddies phenomenon is highly prevalent. The study explains that older men, who are usually married with children, have the resources to satisfy the economic needs of young females. These older men, who are from 'out-of-town', have sex with young females, usually aged around 15-16 years and in return, the young females are lavished with gifts (Kaufman and

Stavrou, 2004). The gender inequality and unequal power relations present in these relationships increase these females' vulnerability by decreasing their safe sex negotiating power (Kaufman and Stavrou, 2004). This increased chance of engaging in risky sexual behaviour increases their risk of contracting HIV and/or STIs and experiencing early childbearing.

Studies have also highlighted a link between socio-economic status and transactional sex where the material objects exchanged are required for survival and not for material gain. In these situations, sex is exchanged for groceries, household appliances and school fees. Reporting on four sub-Saharan African countries, Moore, Biddlecom and Zulu (2007) noted that the greater the dependency on the object being exchanged, the more vulnerable the female is. Moore Biddlecom and Zulu (2007) explain that in these situations, young females' safe sex negotiating power becomes minimal, if any, and the sexual encounter becomes more coercive and violent. Similarly in their study, Kaufman and Stavrou (2004:387) found that young females who belonged to low socio-economic households and live in rural areas are viewed as being "a little less sophisticated". The study revealed that these young females are manipulated and seduced because they desperately need the item being exchanged and as a result, they participate in risky sexual behaviour (Kaufman and Stavrou, 2004). Similarly, the study reports that young females belonging to high socio-economic status households were found to have a lower risk of engaging in risky sexual behaviour because they are not dependent on the object being exchanged (Kaufman and Stavrou, 2004). These findings further substantiate the link between poverty and socio-economic status and transactional sex.

In support of this argument, Eaton Flisher and Aaro (2003) have also identified a link between the act of sexual coercion and the young female's socio-economic status. Hallman (2005) supports this position noting that in KwaZulu-Natal, South Africa, young females who belong to poor household, had higher odds of engaging in risky sexual behaviours such as non-consensual sexual debut, early sexual debut, coerced sex and transactional sex. Hallman (2005) suggests that poverty and the lack of parental resources foster environments in which young females experience transactional and coerced sex.

2.4 Summary

This chapter provided a review of literature which highlighted the possible determinants of early childbearing. Studies have identified early childbearing as a global problem and therefore understanding the context in which it occurs is essential when developing interventions and policies aimed at curbing this phenomenon. Various socio-demographic and economic factors were discussed in this chapter however more research is required across urban and rural spaces. This study aims to highlight socio-economic factors as important determinants of early childbearing in a South African context of high unemployment rates, poverty and HIV prevalence. In highlighting the influence social conditions have on early childbearing, it is important to note that there is no clear-cut, definitive determinant of childbearing. Each topic reviewed in this section is intertwined with each other and are equally important when understanding the determinants of childbearing in a South African context.

Chapter Three: Methodology

3.1 Introduction

This chapter outlines the research methodology used in the study. The first part of the chapter discusses the advantages and disadvantages associated with the use of secondary data. The chapter looks in detail at the main source of data for the study: the NIDS. Outlined in this chapter are also the study sample and variables of interest. The research hypothesis and analytic methods employed to test the hypothesis are also explained. The limitations of the study are discussed followed by a summary of the chapter.

3.2 Sources of data

3.2.1 Secondary data

Quantitative analysis on secondary data is employed in this study and therefore it is important to understand the advantages and disadvantages associated with the use of secondary analysis. One of the main advantages of analyzing secondary data is that it is cost-effective because the data has already been collected. In some cases, secondary data sets need to be purchased however this cost is far lower than the cost of collecting the data (McCaston, 2005; Boslaugh, 2007). Time is also saved when analyzing secondary data as the dataset is often available in an electronic format which has been cleaned and coded (McCaston, 2005; Boslaugh, 2007). Another benefit of using secondary data is its large sample size. This is because many independent researchers are unable to collect data from a representative sample of the population due to resource and time limitations (Boslaugh, 2007). Therefore, nationally collected data is important as it highlights social trends which have policy implications. Experts and professionals usually inform the planning and collection of secondary data. During this process, complex sample designs and methods of estimating population weights are used to ensure generalizability and allow for the computation of population parameters (Boslaugh, 2007).

The inherent nature of secondary data serves as a disadvantage. This is the case because the data was not collected with the researcher's specific aims in mind. As a result it may be problematic finding data on rare or sensitive topics of interest. It is also possible that the data may not have been collected in the year, geographic space or on the specific population group that the researcher requires (McCaston, 2005; Boslaugh, 2007). Therefore, when attempting to use secondary data it is important to ensure that the data is able to address questions focused on in the study. In addition, McCaston (2005) explains that the goals and purpose of the original and secondary researchers may differ which could potentially bias the study. Therefore, knowing the intended use of the data will help to evaluate the quality of the data and account for any potential biases (McCaston, 2005). Various authors argue the fact that researchers are not always a part of the planning and execution of the survey. This serves as a disadvantage to researchers as they are unaware of the intricacies associated with designing the study. Specifically, the secondary researcher is unaware of any biases caused by the data collection process such as the misunderstanding of questions and non-response (Church, 2002; McCaston, 2005; Boslaugh, 2007). As a result, Church (2002) suggests that extensive technical papers detailing these and similar problems be made available. In cases where such documents are unavailable, researchers need to be cautious and use their discretion when using the data (McCaston, 2005; Boslaugh, 2007).

3.2.2 The National Income Dynamics Study

This study analyzes data from the 2008 National Income Dynamics Study (NIDS). NIDS is a household survey conducted by the South African Labour and Development Research Unit (SALDRU) based at the University of Cape Town (UCT). The survey is designed as a nationally representative panel study which tracks and collects data on individuals and the households in which they live, at two year intervals. The tracking and collection of data includes people who have moved from the household in which they were first surveyed, as long as the move occurred within the country's national boundaries. The aim of the study is to track changes in the well-being of South Africans. Thus the key feature of the study is its ability to follow people as they move out of the 7305 households surveyed in the first wave and set up households of their own. These moves and changes in well-being are captured in the subsequent waves of the study.

In motivating for the collection and use of panel data, Leibbrandt, Woolard and de Villiers (2009) indicate that panel data has been instrumental in understanding societal change in other countries. Such data sheds light on those who are progressing in society and those who are not. More importantly, panel data allows for the identification of factors which drive such change. In addition, Leibbrandt, Woolard and de Villiers (2009) suggest that panel data plays an invaluable role when evaluating and monitoring the effectiveness of social policy and programs. This is because the nature of panel data allows researchers to note the changes experienced when individuals become eligible for certain programs and grants.

The first wave of data was collected in 2008 which forms the baseline of the study. In the baseline, 28 000 individuals and 7305 households were surveyed. The survey uses a combination of household and individual questionnaires which collects information on a wide range of topics such as migration, fertility and mortality, income, expenditure and consumption of households over time. Information is also collected on the health status of household members in the form of anthropometric measures. Other themes addressed in the study include vulnerability and social capital, health and education, transition from school to work and events and characteristics which shape the years from youth to adulthood. The study aims to use the data collected to shed light on coping strategies used in response to negative and positive household shocks. For example, the data will be used to understand how the household deals with the death of a family member or the employment of a previously unemployed relative. More specifically, the survey collects detailed information on the respondent's birth history. This allows for the identification of females who have experienced early childbearing and the calculation of the average age at first birth. Information regarding respondents' highest educational level completed and whether any grades were repeated in school is also captured. NIDS also collects information on whether the respondent became a maternal, paternal or double orphan before the age of 5 or 15 years. Information on employment status, receipt of the child support grant and socio-economic status of the household are also collected.

3.2.2.1 Sampling technique and weights

NIDS employed a stratified, two-stage cluster sample design for the baseline wave of the study. The first stage of the design included the selection of 400 primary sampling units (PSUs) from Statistic South Africa's Master Sample of 3000 PSUs in 2003. The Master Sample that was used was the same sample used in the General Household Surveys and Labour Force Surveys between 2004 and 2007 by Statistics South Africa (Leibbrandt, Woolard and de Villiers, 2009). The target of 8000 households were not met in phase one of the fieldwork therefore phase two was carried out. In phase two of the fieldwork, 1856 households from phase one were revisited. Low response rates were expected as these PSUs were difficult to access and most of them had already refused to participate. Phase two saw an additional 807 households being surveyed. As a result, a total of 7305 households and 28 255 individuals made up the base wave of the NIDS (Leibbrandt, Woolard and de Villiers, 2009).

The NIDS target sample were individuals living in private households, residents in monasteries, workers' hostels and convents in the country's nine provinces. Institutions such as hospitals, prisons, old age homes, students' hostels and military barracks were excluded from the sampling frame (Leibbrandt, Woolard and de Villiers, 2009). NIDS cautions against the analysis of data at provincial level as the sample was not selected and designed to be representative at provincial level (Leibbrandt, Woolard and de Villiers, 2009). Although living on the same dwelling unit, lodgers and live-in domestic workers were recognized as separate households if they did not share resources and/or food. Individuals were classified as household members if they "lived under this 'roof' or within the same compound/homestead at least 15 days during the last 12 months or who arrived in the last 15 days and this was now their usual residence" (Leibbrandt, Woolard and de Villiers, 2009: 11). In addition, these individuals need to share food from a common pot and resources from a common resource pool to be recognized as household members (Leibbrandt, Woolard and de Villiers, 2009). Besides the household questionnaire, there were three questionnaires which were developed to collect information from household members. Individuals aged 14 years and below filled out a child questionnaire, those aged 15 and above filled out an adult questionnaire and for those who were unavailable, proxy questionnaires were filled out. In the baseline wave, 1754 proxy questionnaires were filled out for adults who

were unavailable. The base wave of NIDS experienced a 69% response rate as during the combined fieldwork phases, 10 642 households were knocked on and off those, 7305 households agreed to participate in the study (Leibbrandt, Woolard and de Villiers, 2009).

The aim of this panel study is to track individuals at two year intervals. Therefore, the data collection includes the collection of personal information to make the tracking and communication with respondents possible. This information is collected in NIDS but not made available to the public to ensure that the respondents are unable to be identified. As a result, there are three versions of the data which are available – the public version, internal version and secure version (Leibbrandt, Woolard and de Villiers, 2009). The public version does not include any personalized information or school and hospital coding. Similarly, the internal version does not include any personal information but includes coding for schools and hospitals, more detailed information on the geographic location of households and information on panel members' occupation and sectors of employment. Upon request by researchers, parts of this dataset or the entire dataset is made available but only for analytic purposes (Leibbrandt, Woolard and de Villiers, 2009). The secure version of the data contains all the information collected, including personal information and is used for tracking and revisiting respondents. This version is not available to researchers for analysis (Leibbrandt, Woolard and de Villiers, 2009).

The calculations of the weights involved a two-stage procedure. In the first stage the design weights were calculated where information from Statistics South Africa, about the process of two-stage sampling from the Master Sample, formed the basis of the calculation. The weights were then calibrated to the 2008 midyear estimates in the second stage of the process (Leibbrandt, Woolard and de Villiers, 2009). As a result, two sets of weights were derived; the design weights and the post-stratification weights. The methods used in designing the weights differ and have implications for its use. The design weights were derived using two sets of calculations. The first step calculated the probably of sampling each PSU while the second step calculated the probability of including each specific household in each PSU into the NIDS sample. Household non-response was corrected for in the second step (Leibbrandt, Woolard and

de Villiers, 2009). To reduce the influence of a few households with large weights, the weights are 'trimmed' to the 95th percentile (Wittenberg, 2009).

Post-stratified weights are designed so that when applied, the weighted sample size matches the population size (Wittenberg, 2009). Therefore, the design weights were calibrated so that the age-sex-race totals match the 2008 midyear population estimates produced by Statistics South Africa (Leibbrandt, Woolard and de Villiers, 2009). Constraints are placed on the post-stratified weights during the calculation process. Besides the age-sex-race totals, the constraints focus on calibrating the provincial distribution to the 2008 midyear estimates. The size of the total weights are also calculated to represent the 2008 estimated population size – 48 687 000. The constraints also focus on keeping the weights constant within the households (Leibbrandt, Woolard and de Villiers, 2009; Wittenberg, 2009).

Changes were made in the dataset resulting in the release of version 4.0 of the data. The weights in version 4.0 had to be recalculated to account for the following three changes. One household was dropped from the sample because the household was interviewed twice, during phase 1 and phase 2 - the interview from the second phase was dropped. Two individuals (an adult and a proxy) from this household were also dropped from the sample. Further analysis identified a polygamist in the dataset who was recorded as a resident in two households. No changes were made in the data however, the presence of the polygamist has implications when different STATA files are merged (NIDS, 2012b). The third change deals with the age-sex-race classification of the Indian subsample. Some of the age brackets had to be collapsed because of small frequencies in some of the cells (NIDS, 2012a). The methods used in the re-calculation of weights for version 4.0 were the same methods used in the calculation of the original set of weights. Due to the minor changes in the data and the new weights, using the new weights should yield the same or very similar results as those produced using the old weights (NIDS, 2012a).

3.3 The study sample, weights and research hypothesis

The study sample contains 2623 females aged 15-24 years at the time of data collection. All women who are currently in their reproductive years (15-49 years) are not included in the sample because retrospective data becomes a problem with older women. In addition, the characteristics of an individual's socio-economic and demographic situation changes throughout a life span. Therefore, focusing on all women in their reproductive years would not be meaningful in identifying the possible determinants of early childbearing. Furthermore, the questions asked in NIDS focus on the respondent's current socio-economic and demographic situation. Each respondent in the study sample completed an adult questionnaire as they are 15 years and older.

Data analysis is done on weighted data so that inferences about the population can be made. Trimmed design weights are used and are recorded under the variable: *dtwgt_p1*. Once the weight is set, the *'svy'* command is used which tells STATA to treat the data as weighted survey data. As discussed, minimal changes were made in the re-calculated weights therefore, the originally calculated weights are used.

This study aims, among other, to identify whether a relationship exists between socio-demographic and economic factors and childbearing among young people in South Africa. Based on this, the null hypothesis states that there is no significant relationship between socio-demographic and economic factors and childbearing among young people in South Africa.

3.4 Description of variables

3.4.1 Dependent variable

The dependent variable being investigated is ever given birth. The variable was derived from the following question in the NIDS adult questionnaire: C1.2 - Have you ever given birth?

The following response options were provided:

1 = Yes

2 = No

The question is located under section C1: Children ever born. This section captured data related to the birth history of the individual. For the purposes of this study, data was collected from each female aged 15–24 years who had completed an adult questionnaire and had information filled out under section C1.

For analysis purposes, a dummy variable is created where:

0 = has not given birth

1 = has given birth

3.4.2 Independent variables

A range of socio-demographic and economic variables are tested to measure its effect on the dependent variable. When making sense of the independent variables used, it is important to understand that early childbearing is a context based issue and therefore its determinants will vary across different contexts. The independent variables used in this study are tested as proposed determinants of childbearing among young people in a South African context.

Age

Age is an important independent variable as it serves to explain trends in childbearing by age groups. The study sample consisted of females aged 15-24 years. The variable used to determine the age of the respondent is a derived variable recorded as: *r_best_age_yrs.*

A dummy variable named *youngppl* is created where:

0 = other

1 = females aged 15-24 years

In order to capture the different levels of childbearing among females aged 15-24 years, analysis is also done on females aged 15-19 and 20-24 years. This is important as females aged 15-19 years encounter different social pressures compared to females aged 20-24 years.

Population group

Although South Africa has been a democracy for 19 years and efforts are made to redress past inequalities, population group remains an important factor when attempting to understand social trends. Population group is especially important when understanding fertility trends as family planning was used as a tool to control the growth of the African population in the apartheid era. The question: B3 – What population group would you describe yourself as belonging to? is used to derive the population group variable. The response options are:

1 = African

2 = Coloured

3 = Indian

4 = White

These classifications are maintained in the analysis. The logistic regression analysis requires these classifications to be created into dummy variables where 1 represents the racial classification and 0 represents other.

Place of residence

Place of residence impacts access to sexual and reproductive health resources and information and therefore is a significant independent variable. A report by the World Health Organization (2006) revealed that place of residence has an influence on the age at which young people begin childbearing. Studies also suggest that various pull factors may cause young people to migrate

into larger cities which influence levels of early childbearing within urban areas (Panday et al., 2009; McDevitt et al., 1996). In order to capture this trend a variable called *hhgeo* is used. This is a derived variable with the following response options:

1 = rural formal

2 = tribal authority areas

3 = urban formal

4 = urban informal

These classifications are used in the analysis however for the logistic regression analysis, each response option is created into dummy variables as follows:

0 = other

1 = hhgeo classification

Marital status

Marriage commonly represents the onset of exposure to the risk of childbearing for women (Palamuleni, Kalule-Sabiti and Makiwane, 2007). Although marriage is delayed in South Africa, it remains an important factor when understanding trends in childbearing. The NIDS questionnaire asks: B5 – What is your current marital status? with the following response options:

1 = married

2 = living with partner

3 = widow/widower

4 = divorced/ separated

5 = never married

For analysis purposes, the response options are collapsed to capture broadly those females who are married or living with a partner and not currently married. The number of females who are divorced and widowed is minimal because of the young ages of the sample. Therefore, the divorced and widowed responses are combined with the never married response option to produce a not currently married category. Females who are married or living with a partner are collapsed into one category. This is fitting in the context of delayed marriage and increased cohabiting which South Africa is currently experiencing. This marital status variable is converted

into a dummy variable for the logistic regression analysis where 1 represent females who are married or living with a partner and 0 represents those females who are not currently married.

Religious denominations

Religion plays an important part in the lives of many as it provides protection against social issues. Religion also provides a framework in which events and behaviours are understood, moralized and classified as good or bad, in simple terms. Therefore, identifying the percentage of the sample that belongs to a religious denomination is important in understanding the social contexts in which people develop. NIDS collects information on the different religious denominations to which people belong. Under section M: Well-being and social cohesion, the question asks: What religion are you? with the following response options:

1 = No religion	3 = Jewish	5 = Hindu	7 = other
2 = Christian	4 = Muslim	6 = African traditional spiritual beliefs	

For analysis purposes, these response options are collapsed into three categories. The no religion category captures respondents who do not follow a religion while the Christian category captures respondents who follow Christianity. Respondents who follow the African traditional spiritual beliefs, Jewish, Muslim and Hindu religious denominations are capture under the other category. These response options have been collapsed into one category as the sample sizes are fairly small. These three categories are also created into dummy variables to allow for the logistic regression analysis where 1 represents the religious denomination and 0 represents other.

Orphan status

The AIDS epidemic has resulted in many young people growing up without parents. In many cases these young people assume parental roles and responsibilities. Therefore, orphan status is a significant variable to measure the effect that the loss of a parent/s has on early childbearing. The orphan status variable is derived using the following two questions:

D3 – In what year did your […] die?

D4 – Did your […] die before you were 15 years old?

The variable is derived by subtracting the year of death provided in question D3 from 2008 to produce the number of years ago the parent died. This is then subtracted from the respondent's current age to determine the age of the respondent when her parent died. If the age is below **15 years,** the respondent is classified as an orphan. This data is combined with the data from question D4 to produce the orphan status variable. A filter was provided in the questionnaire which restricted response to question D4 if a response was provided for question D3. Therefore, respondents were not counted twice.

The orphan status variable is set up to capture trends associated with double, maternal and paternal orphans. An individual is classified as a maternal orphan if her mother died before she turned 15 years old. Similarly, a respondent is classified as a paternal orphan if her father died before she turned 15 years old. In situations where both of the respondent's parents died before she turned 15 years old, the respondent is classified as a double orphan (Case, Paxson and Ableidinger, 2004). Analysis is done according to the above classifications. Dummy variables are set up for the logistic regression analysis where 1 represents the orphan status and 0 represents other.

Employment status

Employment status is a significant variable which enables inquiry into the young females' involvement in the labour market. The sample includes females aged 20-24 years who should be done with their schooling career and should have been absorbed into the labour market. Therefore, chi-square analysis is done to test the association between females aged 20-24 years who have experienced childbearing and employment status. Employment status is also used in the bivariate and multivariate logistic analysis to test the odds associated with employment status and experiencing early childbearing for females aged 15-24 years.

NIDS categorizes working age adults into four mutually exclusive categories. 'Not economically active' refers to individuals who are unemployed and do not want to find employment. Students/scholars, the retired and home-makers are usually captured under this category. Individuals who are engaged in some type of productive activity, usually with the aim of earning money are referred to as 'employed' (Ranchhod, 2009). The category 'discouraged unemployed' consists of individuals who are unemployed and have not actively searched for employment in the past four weeks but would have liked to work in the same time period. '**Searching unemployed**' refers to unemployed individuals who have actively searched for employment in the last four weeks (Ranchhod, 2009).

The employment status variable is a derived variable with the name *empl_stat*. Analysis is done according to the employed, unemployed and not economically active categories. Females who were enrolled in school or in a tertiary institution at the time of enumeration are captured under the not economically active option. The discouraged unemployed and searching unemployed categories are combined to create an unemployed category for analysis. This employment status variable is used as a categorical variable. Dummy variables are created for regression analysis purposes where 1 represents the employment status and 0 represents other.

Socio-economic status

Part of the aim of this study is to identify possible socio-economic determinants of childbearing among young people. Therefore, a variable which captures socio-economic status is essential for the analysis. To measure the effect socio-economic status has on early childbearing, a relative household wealth index is used. The use of this index is suitable because the majority of females aged 15-24 in South Africa are unemployed, not married and live with parents or grandparents. As a result, the wealth status of the household is not influenced by the respondent (Hallman, 2005). More so, the index measures socio-economic position which "refers to the holding of assets, the income these assets produce, and the consumption that such income permits"

(Hallman, 2005:39). As mentioned, this study focuses on the effects socio-economic position has on the odds of experiencing childbearing among young people.

NIDS collects a comprehensive household asset list which captures the ownership of 27 possible items. The question is located in Section F: Durable goods and asks: Does the household own at least one […]? with the following response options:

1 = Yes

2 = No

The asset list includes a wide range of items from a radio, computer, electric stove and sewing machine to a motor boat, lounge suite, washing machine and private motor vehicle. The last 5 assets on the list are not included in the analysis as they are not owned by any of the households. These assets are: donkey cart or ox cart, plough, tractor, wheelbarrow and grinding mill.

The variable is constructed by first summing the number of assets owned by the household. K-median clustering is then used to determine ranges of asset ownership. The STATA command used to calculate the ranges is: *cluster kmedian numassets, k(5).* The command is set up to produce 5 ranges which correspond closely to wealth quintiles which are described as follows:

Table 3.1: Household wealth levels

Household wealth level	Number of assets owned by the household
Low wealth household	0 – 3 assets
Low-middle wealth household	4 assets
Middle wealth household	5 – 6 assets
High-middle wealth household	7 – 11 assets
High wealth household	12 – 22 assets

Table 3.1 details the number of assets owned by the household which are associated with the different levels of household wealth levels. As mentioned above, the asset ranges are identified using the k-median clustering. A household which owns 0-3 assets is classified as a low wealth household. Similarly, households which own 7-11 assets are classified as high-middle wealth households. This linear and flexible method of determining socio-economic status allows for the analysis of early childbearing by wealth level. The disadvantage associated with simply summing the number of assets owned by the household is that costly and inexpensive assets are given the same weight. However, this method has been shown to be reliable and is used in a number of studies (see Hatloy et al., 2000; Hallman, 2005; Mete, 2005; Bollen, Glanville and Stecklov, 2007). Regression analysis requires the wealth quintiles be transformed into dummy variables where 1 represents the household wealth status and 0 represents other.

3.5 Analysis Techniques

This study conducts secondary analysis on the baseline wave of the NIDS dataset. Analysis is done to identify the levels of early childbearing and possible determinants of childbearing among young people in South Africa. Key to identifying the determinants of early childbearing is to understand the context in which it occurs. More so, due to the fluid and constantly changing nature of society, there could never be a single identifiable determinant of early childbearing. Rather, a number of interlinking factors which foster environments in which risky sexual behaviour occurs are addressed. Therefore, this study proposes a number of possible determinants of childbearing among young people. It is important to acknowledge that a linear relationship does not exist between poverty and childbearing among young people. Studies have extensively explored poverty as a cause and consequence of early childbearing, especially in developing regions. This study focuses on poverty as a determinant of childbearing among young people, where socio-economic status is used as a proxy for poverty. However, the possibility of reverse causality is acknowledged.

Data analysis is done using the quantitative software package, STATA version 12 which was created by StataCorp in 1985. The analysis is split into three parts. In the first part, descriptive statistics are used to explore the sample characteristics. The second part consists of bivariate analysis. Here, chi-square tests are used to identify a statistically significant association between females aged 15-24 years who have experienced childbearing and various socio-demographic and economic factors. The third part of the analysis focuses on regression analysis to test the relationship between early childbearing and the identified independent variables. Logistic regression analysis has been selected as the method of analysis because the dependent variable is a discrete variable with a binary response option – either yes or no. This is in keeping with Hosmer and Lemeshow (2000) who explain that when conducting logistic regression analysis, the dependent variable should be binary or dichotomous. Hosmer and Lemeshow (2000) suggest that logistic regression analysis be adopted when one aims to investigate or describe the relationship between an outcome variable and a set of explanatory variables. Bivariate logistic regression analysis is conducted where the unadjusted odds of experiencing childbearing for females aged 15-24 years are discussed. This is followed by multivariate logistic regression analysis where the adjusted odds of experiencing early childbearing are explored. In STATA, the *svy: logit* command is used to produce the required logistic regression analysis. In keeping with the standard used in social science research, all tests will be done at the 95% level of confidence ($p < 0.05$) (Tredoux and Durrheim, 2006).

3.6 Limitations of the study

Childbearing among young people is a social issue with determinants that are context based. Therefore, similar to other social issues studied there is never a clear cause and effect. Similarly, this study cannot attribute a specific determinant as the cause of childbearing among young people rather, it proposes various possible determinants.

As discussed earlier, one of the disadvantages of analyzing secondary data is that the survey was not designed to answer specific questions raised by the researcher. Similarly, questions asked in NIDS prohibit the study from addressing important issues such as transactional and coerced sex.

The sensitive nature of these issues serves as a challenge to capture in national surveys therefore they are addressed in more detail in smaller studies (see Varga, 1997; Kaufman and Stavrou, 2004; Maharaj and Munthree, 2007; Manzini, 2007; Moore, Biddlecom and Zulu, 2007; Harrison, Cleland and Frohlich, 2008). However, this does not mean that the importance of these social issues should be marginalized or forgotten. Therefore, although NIDS does not allow for the analysis of transactional and coerced sex, this study highlights the negative outcomes associated with these behaviours and suggests that more attention needs to be focused on addressing these issues.

Although NIDS is a longitudinal study where information is collected from panel members every two year, this study makes use of only the base wave of NIDS. Therefore, the analysis is essentially done on cross-sectional data. As with other types of data, the use of cross-sectional data comes with limitations. The data restricts the analysis of change over time as only a snap-shot of events occurring in the country at the point of data collection are provided (Rafferty, 2011). Rafferty (2011) suggests that using this snap shot for analysis can prove to be problematic. It could lead to misleading conclusions and inferences as it does not provide insight into the process of social change occurring in the country (Rafferty, 2011). Besides the empirical nature of the method of analysis employed in this study, the results and inferences made are further substantiated by studies reviewed in the literature review. This serves as a method of validating the results and allowing inferences about the population to be made.

3.7 Summary

The purpose of this chapter was to outline the methods of analysis used in the study. Quantitative research methods are employed using descriptive and inferential statistical analysis. This allows for inferences to be made about the population. Analysis is done on wave one of NIDS to identify levels and determinants of childbearing among young people. The study sample and research hypothesis were also discussed in this chapter together with the independent variables and the dependent variable being investigated. The following chapter presents the results obtained from the study. When interpreting and discussing the results it is important to

understand the limitations associated with the study and the advantages and disadvantages associated with the use of secondary data.

Chapter Four: Results

4.1 Introduction

This chapter outlines the main findings of the study. The study aims to identify the extent and determinants of childbearing among females aged 15-24 years in South Africa. The data for the study comes from the 2008 wave of the National Income Dynamics Study. The analysis is restricted to females aged 15-24 years. This chapter starts by describing the various socio-demographic and economic characteristics of all females aged 15-24 years in the sample. Secondly, using statistics derived from bivariate analysis, this chapter paints a picture of the extent of childbearing among young South African females. Thirdly, bivariate and multivariate logistic regression analysis is used to understand the relationship between the outcome variable (ever given birth) and the various predictor variables. The results are weighted to be nationally representative.

4.2 Sample characteristics

Table 4.1 presents the distribution of the sample by population group, religion and marital status. Of the four population groups, African females make up the largest percentage (88.58%) while Indian females represent the lowest percentage of the sample with 1.38%. Coloured females constitute 6.80 % of the sample while White females constitute 3.25%. This is in keeping with the country's racial distribution. Data from the South African Institute of Race Relations reveals that of females aged 15-24 in 2011, 84% were African, 8% Coloured, 2% Indian and 6% White (Statistics South Africa, 2011).

NIDS also collected information on religious denominations. The majority of the sample belongs to the Christian faith (87.56%) while the smallest percent of the sample belong to the Jewish faith (0.28%). The African traditional religions are followed by 4% of the sample while 0.53% follows the Muslim faith and 0.48% follows the Hindu faith. It is interesting to note that 7% of

the sample reported no religion, this constitutes the second largest percentage of the population after Christianity. Females aged 15-24 years are at a stage in their life where key decisions are made. They experience social, biological, physical and emotional change. During the period of transition, they experiment sexually, develop a sense of self and establish themselves in society.

Table 4.1: Distribution of sample characteristics for females aged 15-24 years

Population Group	***%***
African	88.58
Coloured	6.80
Indian	1.38
White	3.25
Religion	
No Religion	7.00
Christian	87.56
Jewish	0.28
Muslim	0.53
Hindu	0.48
African Traditional Religions	4.15
Marital Status	
Married	4.54
Living with Partner	5.93
Widow	0.02
Divorced	0.00
Never Married	89.51
n	**2623**

Source: NIDS, 2008
Note: Data are weighted

Therefore, their successful negotiation through this transitional period impacts on the nature and quality of their future lives (National Research Council and Institute of Medicine, 2005). Hence, religious institutions have the potential to play a vital role in their development. Religious

institutions provide young people with guidance, answers and a place to turn to in times of need. Similarly, Denton and colleagues (2008:3) indicate that religious institutions "were good places to receive advice and talk about problems". Therefore, it is of concern that 7% of females aged 15-24 years indicated that they follow no religion.

Research has found that marriage is not the norm in South Africa. With the entry of females in the labour market, childbearing out-of-wedlock has become common. As a result, marriage is postponed to older ages or does not happen at all (Kaufman, de Wet and Stadler, 2001; Palamuleni, Kalule-Sabiti and Makiwane, 2007). Therefore, it is not surprising that approximately 5% of the sample reported that they were married while almost 90% reported that they were never married. With a young sample and a small percentage of those who are married, it is expected that the percentage of the sample that are widowed and separated/divorce are small. Lobola is still commonly practiced in South Africa however only 14 individuals who were enumerated reported that they received lobola payments in the last month. A sample size of 14 is small and therefore could not be used in analysis using weights. A possible reason for the small number of people receiving lobola could be the current global economic recession. Globally, people are experiencing financial difficulty and South Africa is no exception. Therefore, it could be possible that prospective grooms are unable to secure the amount of lobola that is being requested. For example, Kaufman and colleagues (2001:153) indicate that the meaning and cost of lobola has changed over time. They state that in the past, the standard cost was approximately 12 cows. At present, the cash equivalent is about R10 000. However, they go on to state that the lobola amount is largely determined by the bride's level of education and the number and paternity of her children (Kaufman, de Wet and Stadler, 2011: 153).

Table 4.2 provides the distribution of females aged 15-24 years, across geographical locations. The majority of the sample live in urban formal areas (45.29%), and the smallest percentage of the sample live in rural formal areas (4.70%). Tribal authority areas are areas which are governed by a chief and permission to live on land in these areas is provided by the chief. Approximately 37% of the sample lives in tribal authority areas and 13% live in urban formal areas. The

majority of the sample is found in the three populated provinces in South Africa. Gauteng is home to 22% of the sample, KwaZulu-Natal, 20% and the Western, Eastern and Northern Cape with 8%, 15% and 1%, respectively.

Table 4.2: Distribution of females aged 15-24 years, by geographic location

Place of Residence	***%***
Rural formal	4.70
Tribal authority area	37.19
Urban formal	45.29
Urban informal	12.82
Province	
Western Cape	7.53
Eastern Cape	15.37
Northern Cape	1.48
Free State	5.18
KwaZulu-Natal	19.82
North West	6.83
Gauteng	22.18
Mpumalanga	7.57
Limpopo	14.04
n	**2623**

Source: NIDS, 2008

Note: Data are weighted

Table 4.3 presents the distribution of females aged 15–24 years by their highest level of education and employment status. Included in Table 4.3 is the distribution of the sample that was enrolled in an educational institution, either school or tertiary education at the time of enumeration. This analysis is done for the entire sample – all females aged 15-24 years and then for females aged 15-19 years and 20-24 years.

Table 4.3: Distribution of females by selected socio-economic characteristics

Enrolled in an institution	***%***
15 – 24 years	51.87
15 – 19 years	78.55
20 – 24 years	24.89
	Females aged 20-24 years
Highest Level of Education	
No Schooling	1.00
Completed Primary	4.81
Completed Secondary	77.31
Tertiary Education (incl. postgraduate studies)	4.41
Other	12.19
Employment status	
Not economically Active	34.59
Unemployed – Discouraged	11.64
Unemployed – Strict	27.91
Employed	25.86
N	**1240**

Source: NIDS, 2008
Note: Data are weighted

The analysis is done by these two age groups to capture the percentage of the sample that was enrolled in an educational institution at the time of enumeration. Being enrolled in an educational institution has implications for the results obtained in the highest level of education and employment status analysis. Taking this into consideration, analysis on the highest level of education and employment status is done only for females aged 20-24 years.

Approximately half of the sample (51.87%) was enrolled in an institution at the time of enumeration. Of all females aged 15-24 years, 79% were enrolled in an educational institution, and of all females aged 20-24 years, 25% were enrolled in an educational institution. Analysis of the highest level of education for females aged 20-24 years indicate that 1% of females have

received no formal schooling. The majority of females aged 20-24 years have completed secondary schooling and 4% have completed tertiary education. Tertiary education includes females who have completed a 4 year bachelors degree, diploma or a post graduate degree (including honours). The 'other' category presented in the table includes the attainment of a National Training Certificate 1-3 or a certificate or diploma with or without completion of secondary school. Having more than a secondary school education increases the chances of finding employment in a globally competitive labour market. This increases the likelihood of financial security and helps people escape the cycle of poverty. Being financially secure also means that females are less dependent on male income earners, which reduces their vulnerability. Therefore, it is concerning that almost 5% of females aged 20-24 years only have a primary education. Also presented in Table 4.3 is the distribution of females aged 20-24 years by employment status. The results indicate that almost 35% of females are not economically active. This could be representative of the females, aged 20-24 years who indicated that they were enrolled in an institution at the time of enumeration. It is interesting to note that only 26% of females aged 20-24 years are employed while 28% are unemployed but searching for employment.

Table 4.4 presents a snap shot of the sample of all females aged 15–24 years. Almost 37% of the sample has given birth at least once and 6% reported that they were pregnant at the time of enumeration. Of those females in the sample that have given birth, 52% received the child support grant in the last month. Approximately 3% of the respondents reported that a child in the household often went to bed hungry in the last 12 months because there was not enough food in the household. Similarly, 4% of the sample reported that an adult in the household often went to bed hungry in the past 12 months because there was not enough food in the household.

The results in Table 4.4 indicate that 63% of females aged 15-24 years live with their biological mother while only 38% reported that they live with their biological father. This is expected as South Africa's past policies resulted in many fathers leaving their homes in search of employment in the city. As a result, many children grew up without fathers and wives grew old

without husbands. These fragmented households are still a characteristic of South Africa. In providing further substantiation, Ramphele and Richter (2006:75) indicate that many young people "grew up with little knowledge of their fathers as important figures in their lives. The dismantling of apartheid has not erased the patterns of behavior entrenched by this system".

Table 4.4: Distribution of females aged 15–24 years, by selected characteristics

Selected characteristics	***%***
Ever given birth	36.56
Currently pregnant	5.59
Recipient of child support grant	51.62
Child often went hungry in the last year	3.49
Adult often went hungry in the last year	3.54
Mother resident in household	62.90
Father resident in household	38.40
Orphan status*	
Non-Orphan	63.36
Maternal Orphan	7.40
Paternal Orphan	16.36
Double Orphan	2.85
Socio-Economic Status	
Low Wealth	27.30
Low-Middle Wealth	9.95
Middle Wealth	19.52
High-Middle Wealth	33.54
High Wealth	9.70
n	**2623**

Source: NIDS, 2008

Note: Data are weighted

* These categories are not mutually exclusive and do not equal to 100%

Orphan status identifies whether the individual's biological mother, biological father or both parents died before the individual turned 15 years old. Analysis shows that 3% of the sample was double orphans - they had lost both parents before they turned 15 years old. Approximately 7% of the sample was maternal orphans and 16% were paternal orphans before they turned 15 years old. The higher percentage of paternal orphans is similar to findings reported in other papers (see Anderson and Phillips, 2006; Ardington and Leibbrandt, 2010; Posel and Devey, 2006).

Also presented in Table 4.4 is the socio-economic status of all females aged 15-24 years. The socio-economic status variable aims to loosely capture the wealth status of the household in which the respondent belongs. It is derived by categorizing the number of assets in the household and therefore does not represent individual wealth but rather household wealth. The **largest percentage** of the sample belongs to high-middle wealth households (34%) while 27% of the sample belongs to low wealth households. The results also indicate that 10% of all females aged 15-24 years belong to low-middle wealth and high wealth households and 20% belong to middle wealth households.

4.3 Bivariate analysis

The following bivariate analysis is done on all females aged 15-24 years. The sample is split into those females who have experienced childbearing at the time of enumeration and those who have not. The median age of females aged 15-24 years who have experienced childbearing is 22 years. Table 4.5 presents the percentage of females who have experienced childbearing at the time of enumeration by selected characteristics: age, population group, place of residence and marital status. The analysis highlights a significant association between age and early childbearing. Of all females aged 20-24 years, 57% have experienced a birth. This is not surprising as calculations indicate that the average age at first birth in South Africa is age 21. The results also indicate that 16% of females aged 15-19 years have already experienced a birth.

Table 4.5: Percentage of females aged 15-24 years who have experienced childbearing by socio-demographic characteristics

Age*	***Ever Given Birth***
15-19	15.81
20-24	57.49
Population Group	
African	37.04
Coloured	39.85
Indian	24.87
White	21.58
Place of Residence*	
Rural Formal	52.34
Tribal Authority Areas	36.72
Urban Formal	33.66
Urban Informal	40.52
Religion	
No Religion	44.21
Christian	35.85
Other	39.86
Marital Status*	
Married or living with partner	72.64
Not currently married	32.37
n	**991**

Source: NIDS, 2008

Note: Data are weighted

* Significant at $p < 0.05$

The results reveal that the Coloured population group has the highest percentage of females aged 15-24 years who have experienced childbearing. Approximately 40% of Coloured females aged 15-24 years have given birth compared to 37% of African females. Of all Indian females, 25% have experienced childbearing. This percentage must be interpreted with caution because the sample size of Indian females aged 15-24 years, who have given birth, is small. Therefore, a

larger standard error is presented (11.501) and thus an inflated percentage. Table 4.5 also presents results for females who have given birth by place of residence. A significant association has been identified between place of residence and early childbearing for females aged 15-24 years. The results indicate that females aged 15-25 years who have experienced childbearing are more likely to live in rural formal areas (52%) and least likely to live in urban formal areas (34%). The analysis also highlights that 37% of females aged 15-24 years who live in tribal authority areas and 41% who live in urban informal areas have given birth. These findings are in keeping with literature that indicates that young females who live in less developed areas are at a greater risk of experiencing risky sexual behavior compared to their urban counterparts due to their lack of exposure to media (Eaton Flisher and Aaro, 2003; McIntyre, 2006; Menendez, 2011).

Table 4.5 also presents results on the religious denomination of females aged 15-24 years who have experienced childbearing. The results indicate that 44% of females aged 15-24 years who report no religion, have experienced early childbearing compared to 36% who are of the Christian faith. This difference in percentage could be supportive of the notion that religion plays an important role in young people's development and their transition into adulthood. The other category includes Jewish, Muslim, Hindu and African traditional religious denominations. Of females aged 15-24 years almost 40% who fall in this category, have experienced childbearing. The results in Table 4.5 also highlight a significant association between marital status and childbearing for females aged 15-24 years. Marital status is analyzed by females who are married/living with a partner and those that are not currently married. The not currently married category includes those females aged 15-24 years who are widowed, divorced or have never been married. The results indicate that 73% of females aged 15-24 years who are married or living with a partner, have experienced childbearing compared to 32% of females who are not married.

Table 4.6: Percentage of females aged 20-24 years who have experienced childbearing by selected characteristics

Enrolled in an institution*	***Ever Given Birth***
15-24 years	15.75
15 – 19 years	9.33
20 – 24 years	36.23
	Females aged 20-24
Highest Level of Education*	
No Schooling	72.87
Completed Primary	93.59
Completed Secondary	46.25
Tertiary Education (incl. postgraduate studies)	7.47
Other	40.73
Employment status*	
Not economically Active	50.46
Unemployed	65.11
Employed	54.64
n	**758**

Source: NIDS, 2008

Note: Data are weighted

* Significant at p > 0.05

Table 4.6 presents the percentage of females aged 20-24 years who have experienced childbearing by their highest level of education attained and employment status. Furthermore, presented in Table 4.6 is the percentage of females who were enrolled in an educational institution (either school or tertiary institution) at the time of enumeration and had experienced childbearing. Various studies have found that being enrolled in school serves as a protective factor against risky sexual behavior (Grant and Hallman, 2008). The analysis highlights that being enrolled in an institution is statistically associated with experiencing early childbearing. The results indicate that 36% of females aged 20-24 years who were enrolled in an educational institution at the time of enumeration, had experienced childbearing. This suggests that females aged 20-24 years have children while continuing with their educational trajectory. Of females

aged 15-19 years who were enrolled in an institution at the time of enumeration, 9% have experienced childbearing. It is important to note that the young age of these females (15-19 years) implies that childbearing occurred whilst they were in school. This would result in negative implications for the young female and her child.

The analysis on the highest level of education is done only for females aged 20-24 years because part of the sample is still enrolled in school. The analysis highlights a statistically significant association between the highest level of education and early childbearing for females aged 20-24 years. Chi-square analysis reveals that 7% of females aged 20-24 years who have a tertiary education, have experienced childbearing. The percentages are much higher for females who have a lower level of education. Almost 94% of females aged 20-24 years who have a primary education as their highest level of education, have given birth compared to 46% of females who have a secondary education. The results also show that 73% of females, who have no education, have given birth. The other category presented in the table refers to National Training Certificates 1-3 and certificates and diplomas with or without completion of secondary school. Approximately 41% of females aged 20-24 years who have received either one of those levels of education, have given birth.

Also presented in Table 4.6 is the employment status of females aged 20-24 years who have experienced childbearing. The analysis identified a significant association between employment status and childbearing for females aged 20-24 years. The results show that 55% of females aged 20-24 years who are employed, have experienced childbearing. Of all females aged 20-24 years who are not economically active, 50% have given birth. These females who are not economically active could be representative of those females aged 20-24 years who were enrolled in an educational institution at the time of enumeration and had experienced childbearing. It is interesting to note that a higher percentage of females who are unemployed, have given birth (65%) compared to those who are employed (55%) or not economically active (50%) and have given birth. This is important to note because these females are required to care for a child but

are unemployed. Being unemployed decreases their possibility of escaping the poverty cycle and providing a better quality of life for themselves and their child.

Table 4.7: Percentage of females aged 15-24 years who have experienced childbearing by selected characteristics

Selected characteristics	***Ever Given Birth***
Mother resident in household*	32.59
Father resident in household*	30.80
Orphan status	
Non-Orphan	34.22
Maternal Orphan	39.96
Paternal Orphan	33.49
Double Orphan	21.61
Socio-Economic Status*	
Low Wealth	42.52
Low-Middle Wealth	40.07
Middle Wealth	36.34
High-Middle Wealth	37.95
High Wealth	11.80
n	**991**

Source: NIDS, 2008

Note: Data are weighted

* Significant at p > 0.05

Table 4.7 presents the percentage of females aged 15-24 years who live with their biological mother and/or biological father and have given birth. The results identify a significant association between living with either a biological mother or father and childbearing for females aged 15-24 years. Of all females who live with their biological mother, 33% have experienced early childbearing. Similarly, 31% of females who live with their biological father have given birth. It is interesting to note that almost the same percentage of females who live with their biological mother and/or biological father have given birth. Taking into consideration South

Africa's fragmented family structure, the study expected to find a lower percentage of biological fathers who are members of households with daughters aged 15-24 years who have experienced childbearing compared to biological mothers.

The absence of a parent has been found to increase the risk of engaging in risky sexual behavior among young people. However, studies have noted that the absence of a mother has different consequences for young people compared to the absence of a father (Lloyd and Desia, 1992; Lloyd and Blanc, 1996; Case and Ardington, 2006; Evans and Miguel, 2007). Presented in Table 4.7 are the percentages of females aged 15-24 years, who were orphaned before the age of 15 years and have experienced childbearing - these categories are not mutually exclusive. Of all females aged 15-24 years who were not orphaned by the age of 15 years, 34% have experienced childbearing. Almost 40% of females aged 15-24 years who were maternal orphans before the age of 15 years have experienced childbearing. Similarly, 33% of females aged 15-24 years who were paternal orphans before the age of 15 years have experienced childbearing. Of all females aged 15-24 years who were double orphans before the age of 15 years, 22% have given birth.

The socio-economic status variable represents the household wealth of females aged 15-24 years. A statistically significant association has been highlighted between socio-economic status and childbearing for females aged 15-24 years. The results presented in Table 4.7 indicate that 36% of females aged 15-24 years who belong to middle wealth households, have experienced childbearing. The analysis also shows that 40% of females who belong to low-middle wealth households have given birth compared to 38% of females who belong to high-middle wealth households. It is interesting to note that 12% of females aged 15-24 years who belong to high wealth households, have given birth compared to 43% of females aged 15-24 years who live in low wealth households. Based on these results it is observed that a larger percentage of females aged 15-24 years, who live in low wealth households have experienced childbearing compared to females aged 15-24 years who live in the other four socio-economic status households.

4.4 Logistic regression analysis

Logistic regression analysis is conducted to investigate more rigorously the predictors of early childbearing for females aged 15-24 years. In this model, the outcome variable is ever given birth. For each observation, the dependent variable takes on the value of '1' if the respondent has given birth and '0' otherwise. Bivariate and multivariate analysis is done. The bivariate analysis presents the effects of each independent variable on the odds of experiencing childbearing for females aged 15-24 years without controls. Similarly, the multivariate analysis presents the effects of each independent variable on the odds of experiencing childbearing for females aged 15-24 years after adding controls. The 95% confidence levels are presented in parenthesis.

4.4.1 Bivariate Analysis

This section focuses on the results from the bivariate logistic regressions analysis. The results presents the odds of experiencing early childbearing for females aged 15-24 years by selected characteristics. The outcome variable, ever given birth is regressed against age, population group, place of residence and religion. Table 4.8 presents the odds of experiencing early childbearing by the above predictor variables. The analysis highlights a statistically significant, negative relationship between age and early childbearing. The results show that females aged 15-19 years are significantly less likely to experience early childbearing compared to females aged 20-24 years. Overall, Coloured females aged 15-24 years are more likely to experience childbearing compared to the other race groups. However, population group is not found to be a significant predictor of childbearing among females aged 15-24 years. The results show that Coloured females have higher odds (2.41) than African females (2.14) of experiencing early childbearing compared to White females aged 15-24 years. Indian females aged 15-24 years are also found to be more likely to experience childbearing compared to White females aged 15-24 years.

Table 4.8: The odds of experiencing early childbearing by selected background characteristics for females aged 15-24 years

Age	**Odds Ratio**
15-19	0.14* (0.11-0.18)
20-24	1.00
Population Group	
African	2.14 (0.69-6.64)
Coloured	2.41 (0.72-8.06)
Indian	1.20 (0.23-6.27)
White	1.00
Place of Residence	
Rural Formal	2.16* (1.42-3.30)
Tribal Authority Areas	1.14 (0.90-1.46)
Urban Informal	1.34 (0.88-2.05)
Urban Formal	1.00
Religion	
No Religion	1.42 (0.94-2.14)
Other	1.19 (0.73-1.93)
Christianity	1.00
n	**2623**

Source: NIDS, 2008

Note: Data are weighted

Confidence intervals in parenthesis

*Significant at $p > 0.05$

The analysis of place of residence shows a statistically significant, positive relationship between females aged 15-24 years who live in rural formal areas and childbearing. The results indicate that females living in rural formal areas are approximately two times more likely to experience early childbearing compared females living in urban formal areas. This is expected as literature indicates that females living in rural areas are at a greater risk of engaging in risky sexual behavior compared to their urban counterparts (Eaton, Flisher and Aaro, 2003; McIntyre, 2006; Menendez, et al., 2011). The odds of experiencing childbearing for females aged 15-24 years

who live in tribal authority areas or urban informal areas are higher than that of females living in urban formal areas. The analysis into religion and childbearing highlighted that females who report no religion are almost one and a half times more likely to experience childbearing compared to females of the Christian faith. The odds of experiencing childbearing for females aged 15-24 years who belong to Jewish, Muslim, Hindu or African traditional religions are greater than that of females who follow the Christian faith. Respondents who report Jewish, Muslim, Hindu or African traditional religions are captured under the other category.

The effects of marital status, orphan status, the highest level of education, employment status and socio-economic status on childbearing, for females aged 15-24 years, are investigated in Table 4.9. Due to its small sample sizes, the widowed and divorced categories are combined with the never married category to form the not currently married category. The analysis highlights a statistically significant, negative relationship between marital status and early childbearing for females aged 15-24 years. The results indicate that females who are not married are significantly less likely to experience early childbearing compared to females who are married or living with a partner. Orphan status looks at whether the respondents' biological mother, biological father or both parents died before they turned 15 years. These categories are not mutually exclusive. Females, who were maternal orphans by age 15, are more likely to experience early childbearing compared to non-orphaned females. It is interesting to note that females, aged 15-24 years who were paternal or double orphans before age 15, have lower odds of experiencing childbearing compared to non-orphans. Females who were paternal orphans before age 15 are 0.84 times less likely to experience childbearing compared to non-orphans. Similarly, females who were double orphans before age 15 are 0.49 times less likely to experience childbearing compared to non-orphans. The analysis indicates that orphan status is not a significant predictor of childbearing for females aged 15-24 years.

Table 4.9: The odds of experiencing early childbearing by selected socio-demographic and economic characteristics for females aged 15-24 years

Marital Status	**Odds Ratio**
Not currently married	0.18* (0.12-0.28)
Married or living with partner	1.00
Orphan Status	
Maternal Orphan	1.11 (0.66-1.87)
Paternal Orphan	0.84 (0.61-1.17)
Double Orphan	0.49 (0.19-1.27)
Non-Orphan	1.00
Highest Education Level	
No schooling	26.78* (2.52-284.21)
Completed Primary	4.51* (1.04-19.62)
Completed Secondary	4.12* (1.00-16.98)
Other	3.65 (0.76-17.49)
Tertiary Education (incl. postgraduate studies)	1.00
Employment Status	
Not Economically Active	0.28* (0.20-0.39)
Unemployed	1.28 (0.87-1.88)
Employed	1.00
Socio-Economic Status	
Low Wealth	5.53* (3.38-9.04)
Low-middle Wealth	5.00* (2.83-8.83)
Middle Wealth	4.27* (2.54-7.17)
High-Middle Wealth	4.57* (2.79-7.49)
High Wealth	1.00
n	**2623**

Source: NIDS, 2008

Note: Data are weighted

Confidence intervals in parenthesis

*Significant at p > 0.05

The analysis presented in Table 4.9 also investigates the effect that highest level of education has on childbearing, for females aged 15-24 years. The categories of no schooling, completed primary, completed secondary, tertiary and other are used to analyze the highest level of education. The other category represents respondents who have obtained a National Training Certificate 1-3 or a certificate or diploma with or without completing secondary school. Overall, the results indicate that females aged 15-24 years, who have less than a tertiary education, have higher odds of experiencing childbearing compared to those who have a tertiary education. The analysis also reveals a statistically significant, positive relationship between the education levels of no schooling, completed primary and completed tertiary and early childbearing for females aged 15-24 years. Females aged 15-24 years who have no schooling are 26.78 times more likely to experience childbearing compared to females who have a tertiary education. The odds of experiencing childbearing for females aged 15-24 years who have a primary or secondary school education are four times higher compared to females who have a tertiary education.

The employment status variable is analyzed according to the following categories: not economically active, unemployed and employed. The unemployed category includes females who are unemployed and discouraged from seeking employment and females who are unemployed and are actively seeking employment. The analysis presented in Table 4.9 highlights a statistically significant, negative relationship between females who are not economically active and early childbearing. The results show that females aged 15-24 years who are not economically active are significantly less likely to experience early childbearing compared to females who are employed. The not economically active category represents females who were enrolled in an educational institution at the time of enumeration. These lower odds could be representative of the notion that being enrolled in school serves as a protective factor against risky sexual behavior. The results also indicate that unemployed females aged 15-24 years are 1.28 times more likely to experience childbearing compared to females who are employed.

As indicated in earlier analysis, the socio-economic status variable is indicative of household wealth and not personal wealth. Overall, the analysis shows that socio-economic status is a

significant predictor of childbearing for females aged 15-24 years. The analysis highlights a statistically significant, positive relationship between all levels of socio-economic status and early childbearing for females aged 15-24 years. The results indicate that females aged 15-24 years who belong to low wealth households are almost six times more likely to experience childbearing compared to females who live in high wealth households. Females aged 15-24 years who belong to low-middle wealth or middle wealth households are approximately five times more likely to experience childbearing compared to females who live in high wealth households. It is interesting to note that the odds of experiencing childbearing for females aged 15-24 years who live in high-middle wealth households (4.57) are similar to that for females who live in low-middle wealth (5.00) households.

4.4.2 Multivariate Analysis

This section focuses on the results from the multivariate regression analysis. The results show the effect of each variable on the odds of experiencing childbearing, for females aged 15-24 years, after adding controls. The same predictor variable used in the bivariate logistic regression models are used in this model. Ever given birth is the outcome variable of interest. Table 4.10 presents the odds of experiencing childbearing for females aged 15-24 years by each variable, after adding controls. When looking at the effect age has on the odds of experiencing early childbearing, females aged 15-19 years are found to be 0.20 times less likely to experience childbearing compared to females aged 20-24 years. The results indicate that age is a statistically significant predictor of early childbearing for females aged 15-24 years.

The analysis into the odds of experiencing early childbearing by population group highlights that overall, African and Coloured females aged 15-24 years are more likely to experience childbearing compared to White females. However, Coloured females (2.19) aged 15-24 years remain more likely than African females (1.24) to experience childbearing. The results also indicate that Indian females have lower odds (0.99) of experiencing childbearing compared to White females. When investigating the effect that religion has on the odds of experiencing early childbearing, the results indicate that females who report no religion are more likely to

Table 4.10: The odds of experiencing early childbearing by selected characteristics: results from multivariate logistic regression

Age	**Odds Ratios**
15-19	0.20* (0.15-0.27)
20-24	1.00
Population Group	
African	1.24 (0.44-3.45)
Coloured	2.19 (0.70-6.86)
Indian	0.99 (0.19-5.20)
White	1.00
Religion	
No religion	1.29 (0.78-2.12)
Other	0.75 (0.40-1.42)
Christian	1.00
Place of Residence	
Rural Formal	2.71* (1.59-4.61)
Tribal Authority Areas	1.85* (1.15-2.18)
Urban Informal	1.33 (0.79-2.24)
Urban Formal	1.00
Marital Status	
Not currently married	0.30* (0.18-0.50)
Married or Living with Partner	1.00
Orphan Status	
Maternal Orphan	1.13 (0.57-2.24)
Paternal Orphan	0.99 (0.69-1.42)
Double Orphan	0.53 (0.19-1.49)
Non-Orphan	1.00
Employment Status	
Not Economically Active	0.51* (0.33-0.79)
Unemployed	1.34 (0.85-2.11)
Employed	1.00

Socio-Economic Status	
Low Wealth	6.17* (3.10-12.27)
Low-middle Wealth	4.53* (2.08-9.89)
Middle Wealth	3.91* (1.91-7.98)
High-Middle Wealth	4.94* (2.52-9.67)
High Wealth	1.00
Constant	**0.61**
F-statistic	**16.02**
n	**2582**
N	**39 95249.4**

Source: NIDS, 2008

Note: Data are weighted

Confidence intervals in parenthesis

*Significant at p > 0.05

experience early childbearing compared to females of the Christian faith. Females who follow the Jewish, Muslim, Hindu or African traditional denominations are represented in the other category. These females are 0.75 times less likely to experience early childbearing compared to Christian females.

Investigation into the effect that place of residence has on the odds of experiencing childbearing reveals a statistically significant, positive relationship between females who live in rural formal areas and tribal authority areas and early childbearing for females aged 15-24 years. The results indicate that females living in rural formal areas are three times more likely to experience childbearing compared to females living in urban formal areas. Similarly, females living in tribal authority areas are two times more likely to experience early childbearing compared to females who live in urban formal areas. Marital status is also found to be a statistically significant predictor of early childbearing for females aged 15-24 years. The results show that females aged 15-24 years, who are not married are significantly less likely to experience childbearing (0.30) compared to females who are married or living with a partner.

The effect that orphan status has on childbearing is also analyzed in the multivariate logistic regression. A double orphan refers to respondents who lost both biological parents before the age of 15 years. The categories analyzed are not mutually exclusive. When controls were added, the relationship between females who were paternal or double orphans before age 15 and early childbearing remained negative. Compared to the unadjusted model, the adjusted model identified slightly higher odds of experiencing childbearing for females who were paternal or double orphans. It is interesting to note that females who were paternal or double orphans before age 15 are less likely to experience early childbearing as literature indicates that these females are at a higher risk of engaging in risky sexual behaviour. The odds for females who were maternal orphans before age 15 also increased slightly in the adjusted model from 1.11 to 1.13.

The unemployed category in the employment status variable includes respondents who are unemployed and not looking for a job as well as those who are unemployed and are actively job seeking. The analysis indicates that females, aged 15-24 years who are unemployed are more likely to experience childbearing compared to females who are employed. The odds of experiencing childbearing decrease for females aged 15-24 years who are not economically active. These females are 0.51 times less likely to experience childbearing compared to females who are employed. The results also reveal a statistically significant relationship between females who are not economically active and early childbearing. Table 4.10 also presents the effects that socio-economic status has on the odds of early childbearing for females aged 15-24 years. Similar to the unadjusted model, the adjusted model highlights a statistically significant, positive relationship between all levels of socio-economic status and early childbearing for females aged 15-24 years. Overall, females aged 15-24 years who live in households other than high wealth households are more likely to experience childbearing compared to females who live in high wealth households. The analysis highlights that females aged 15-24 years, who live in low wealth households, have the highest odds of experiencing early childbearing (6.17). It is interesting to note that females who live in high-middle wealth and low wealth households have very close odds of experiencing early childbearing. The analysis also reveals that females living in low-middle wealth (4.53) and middle wealth (3.91) households are more likely to experience childbearing compared to females living in high wealth households. Based on these results,

socio-economic status can be seen as a significant predictor of childbearing for females aged 15-24 years.

4.5 Summary

This chapter presented the results of the statistical analysis focusing on childbearing among young people in South Africa. The analysis was done on the first wave of the National Income Dynamics Study where population weights were used. The study examined the effects of a range of independent variables on childbearing among females aged 15-24 years. Socio-economic status was found to be a significant predictor of childbearing among young people where females who live in low wealth households have the highest odds (6.17) and are more likely to experience childbearing compared to females who live in low wealth households. This is an important finding which will be further discussed in the next chapter. Contrary to the reviewed literature, orphan status was not found to be a predictor of early childbearing. In addition to these main findings, this chapter also described the study sample using descriptive statistic.

Chapter Five: Conclusion

5.1 Introduction

Early childbearing has been identified as a global problem. Studies have highlighted that the rates of childbearing among young people have declined however the pace of decline remains a concern. Key to accelerating the pace of decline is understanding the social context which influence young peoples' decisions. More so, by understanding the social context faced by young people, the country can adopt a proactive stance aimed at decreasing the number of incidences of early childbearing. The study draws on data from the first wave of NIDS, which is a nationally representative survey conducted in 2008, with the aim of providing a statistical insight into the social issue of early childbearing. In light of this, this chapter presents discussions on the main findings of the study. Recommendations and areas for future research are also suggested.

5.2 Discussion of main findings

Recent research reveals that for South African females, motherhood starts early but marriage occurs at a later stage (Palamuleni, Kalule-Sabiti and Makiwane, 2007). This shift can be understood as a by-product of the modernization of society and merging of cultures where preserving ones' virginity is no longer seen as important (Palamuleni, Kalule-Sabiti and Makiwane, 2007). A number of studies have identified a link between coerced and early sexual debut and engaging in risky sexual behaviour (see Manzini, 2001; Thurman and colleagues, 2006; Maharaj and Munthree, 2007; Moore and colleagues, 2007; Okonta, 2007). In keeping with this notion of early sexual debut, this study found that 16% of females aged 15-19 years have experienced early childbearing where age is significantly associated with early childbearing. In addition, bivariate and multivariate regression analysis indicates that age is a significant predictor of early childbearing among young people at a 95% level of confidence. NIDS does not collect information on sexual coercion however various studies have reported that gender-based inequality and violence are a norm in African societies.

When looking at young South African females, Manzini (2001) drew a correlation between early ages of sexual debut and increased likelihood of the female being raped or coerced by older men during sexual debut. In their study on females aged 14-24 years who live in KwaZulu-Natal, Maharaj and Munthree (2007) found that almost 60% of females, who had been coerced at sexual debut, had experienced early childbearing. Gender-based inequality continues to be a problem in South African societies and as a result, negative environments in which sexual interactions occur are fostered. These environments are characterized by violence, reduced use of contraception and limited negotiating power which are determinants of early childbearing. Studies have identified a relationship between age and fertility where fertility increases as age increases (Were, 2007; Panday et al., 2009). Similarly, this study found a significant association between age and experiences of early childbearing where 58% of females aged 20-24 years have experienced a birth compared to 16% of females aged 15-19 years. Bivariate regression analysis indicates that the odds of experiencing childbearing increases as age increases. Females aged 15-19 years have lower odds of experiencing childbearing (0.14) compared to females aged 20-24 years. When controls were added, the odds of experiencing childbearing increased to 0.20 however, these odds remain lower compared to the odds of experiencing childbearing for females aged 20-24 years.

The racial distribution of the sample is similar to the racial distribution of the South African population where African people constitute the majority of the population. Similarly, almost 89% of the sample is composed of African females aged 15-24 years. Coloured females constitute 7% of the sample while Indian and White females make up less than 5% of the sample. It is hard to capture and confirm information on sexual activity, especially in communities where negative connotations are associated with engaging in sex before marriage. When respondents are enumerated, they are surrounded by family therefore it is most likely that questions which are not desirable to answer in front of family are answered incorrectly. This could explain the small sample sizes of Indian and White females aged 15-24 years who reported early childbearing. Similar results were found when analysis was done on the 1998 South African Demographic and Health Survey (Panday et al., 2009). The study reported that 2.2% of Indian females and 2.9% of White females aged 15-19 years had experienced early childbearing (Panday et al., 2009).

Panday and colleagues (2009) explain that the low levels of fertility among Indian and White adolescents can be attributed to the large variation in social conditions under which many young South African grow up.

Taking the racial distribution of the sample into account, the study found that a larger percentage of Coloured females (40%) have experienced childbearing compared to African females (37%) aged 15-24 years. Similar results were presented by Panday and colleagues (2009) in a report on teenage pregnancy in South Africa. Reporting on females aged 15-19 years, Panday and colleagues (2009) found that almost 16% of Coloured females had experienced early childbearing compared to 14% of African females aged 15-19 years. In addition, they reported a teenage fertility rate of 81 births per 1000 women for both Coloured and African females (Panday et al., 2009). In light of these results, Panday and colleagues (2009) explain that the large extent to which the African and Coloured communities are riddled with poverty and unemployment is a possible reason for the high levels of adolescent fertility among these two population groups. However, it is interesting to note that when factors such as variations in social conditions, unequal access to education and health services and disruptions to family structure were controlled for, the difference in fertility levels remain among the different population groups (Panday et al., 2009). Panday and colleagues (2009) suggest that this difference is indicative of different cultural beliefs and practices associated with pregnancy. Drawing on the framework proposed by Hallman (2005), it is evident that the cultural practices and beliefs adopted by the African and Coloured population groups influence their individual proximate determinants. These determinants include their ability to access and use information regarding safe sexual and reproductive health which influences their sexual behaviour. As a result, their decision to engage in risky sexual behaviour increases their chances of childbearing.

Studies suggest that females living in rural areas begin childbearing before their urban counterparts. In a report on pregnant adolescents in developing countries, it was found that 24% of young females living in rural areas have experienced early childbearing compared to 16% of young females living in urban areas (McIntyre, 2006). The analysis indicates that place of

residence is a significant risk factor for early childbearing among young people. The results from the bivariate and multivariate regression analysis found that females, aged 15-24 years who live in rural formal areas have the highest odds of experiencing early childbearing compared to females living in tribal authority areas or urban formal and informal areas. In line with these findings, Menendez and colleagues (2011) report that high levels of early childbearing have been noted in the more rural South African provinces of Mpumalanga and Limpopo. Similarly, using the 1998 South African Demographic and Health Survey, Panday and colleagues (2009) found that the fertility rate was almost double for adolescents living in rural areas (99 births per 1000 women) compared to adolescents living in urban areas (59 births per 1000 women). Although young females who live in rural areas have higher odds of experiencing early childbearing, many studies argue that there is no difference in the risk of engaging in risky sexual behaviour among young people living in rural and urban areas (Eaton and colleagues, 2003; Manzini, 2001).

This notion can be understood in terms of Hallman's socio-economic framework (Hallman, 2005). According to the framework, place of residence influences the presence of and access to sexual and reproductive health services. The lack of these services in rural areas, or in some cases, the difficulty accessing these resources has implications on young people's ability to use these important resources. Their decision to engage in risky sexual behaviour is influenced by this lack of information which increases their risk of experiencing childbearing. In light of this discussion it is important to note that more research is warranted on the fertility trends across place of residence.

In their paper, Palamuleni, Kulule-Sabiti and Makiwane (2007) explain that marriage is an important determinant of fertility. As traditionally, marriage represents the onset of exposure to the risk of childbearing for woman. In line with this notion, the study found that females aged 15-24 years, who were not married at the time of enumeration, have lower odds of experiencing early fertility compared to those that were married or living with a partner. The unadjusted odds increased from 0.18 to 0.30 when controls were added yet, the odds of experiencing early childbearing remain lower for females who are not married compared to females who were

married or living with a partner. Traditionally, proving ones fertility was an important precursor to marriage however, due to more importance being placed on education and contraception use, this practice has weakened but still exists (Woldemicael, 2005). Furthermore, the decrease in the number of children a woman bears can be understood as a change in thinking. Traditionally, importance was placed on having many children as it was seen as a form of security at older ages. However, modern technology, contraceptive use, the importance of education and female participation in the labour market has resulted in a change of thinking where quality is preferred over quantity. This has resulted in women having fewer children and more resources are spent on providing the best care for the child. Although, South Africa's total fertility rate has declined, adolescent fertility remains high (Panday et al., 2009).

Studies suggest that lobola is still practiced in South Africa and being able to prove ones fertility increases a bride price (Kaufman, de Wet and Stadler, 2001). In a study on young people in Limpopo, South Africa, Wood and Jewkes (2006) explain that many young females continue express importance in being able to prove their fertility as it not only increases their bride price but also elevates them to a higher social status. However, this is not the case in all developing contexts. Singh (1998) opposes this position by noting that in some developing communities, having a child out of wed-lock is not tolerated and females who experience early childbearing are marginalized. In support of this, Okonta (2007) describes that in the Niger Delta region of Nigeria, early marriage is not seen as ideal because it results in early ages of sexual debut which increases the risk of unintended childbearing.

When analyzing family structure and its importance in the development of young people, many studies suggest that the presence of both parents is vital as parents satisfy different needs required by their children. These needs include care, stability, economic support and socialization (Lloyd and Desai, 1992). Using longitudinal data, Case and Ardington (2006) found that in South Africa, the absence of a father is associated with negative socio-economic outcomes. This is because a fathers' absence affects the amount of income which is brought into the household. Similar results were found by Lloyd and Desai (1992) who indicate that the

presence of a father is associated with financial support. Furthermore, studies suggest that the needs fulfilled by the presence of a mother differ from those satisfied by the presence of a father (Lloyd and Desai, 1992; Lloyd and Blanc, 1996; Evans and Miguel, 2007). These studies argue that young people living in female-headed households are at an advantage compared to their counterparts living in male headed-households. This is because resources in female-headed households are more likely to be spent on items which benefit the young person. For example, less money would be spent on cigarettes and alcohol and more on foods with a higher nutritional value (Lloyd and Desai, 1992; Lloyd and Blanc, 1996; Evans and Miguel, 2007).

In light of this discussion, it is interesting to note that the analysis suggests no statistically significant association or relationship between orphan status and early childbearing. An individual was classified as an orphan if either their mother and/or father died before they turned 15 years of age. The unadjusted model revealed that females who were maternal orphans before age 15 were one time more likely to experience early childbearing compared to non-orphans. The results also showed that females who were paternal orphans (0.84) or double orphans (0.47) before age 15 were less likely to experience early childbearing. When controls were added, these odds increased slightly however, the relationship between orphan status and early childbearing remained statistically insignificant.

The presence of close familial ties and social networks in many African communities serve as a buffer when children are orphaned. This is because parental responsibilities are assumed by the extended family and/or friends. This could be a possible explanation for why orphan status was not found to be a significant predictor of early childbearing for females aged 15-24 years. Many studies support this position and note that a by-product of the HIV/AIDS epidemic is the establishment of households where older generations support younger generations (Makiwane, 2010a). In their study on older people and care giving in Mpumalanga, South Africa, Makiwane, Schneider and Gopane (2004) indicate that 46% of people, aged 60 years and older, care for young people aged between 6-18 years old. In addition, they report that grandmothers are more likely to be care givers compared to grandfathers (Makiwane, Schneider and Gopane, 2004).

Similarly, using data from sub-Saharan African countries, Zimmer and Dayton (2005) found that grandparents were seen as 'natural care givers' of grandchildren in regions that lost most of their middle aged adults to the HIV/AIDS pandemic. Their study also found that almost 46% of the sample reported that they live with a grandchild while almost 14% of the older adults in the sample indicated that they live with no adult child but with at least one grandchild (Zimmer and Dayton, 2005). In support of other studies, Zimmer and Dayton (2005) also argue the notion that grandmothers are more likely to be care givers compared to grandfathers. Although these strong familial ties appear to have a positive effect on the odds of experiencing early childbearing, it must be noted that the social distance between the generations may result in grandparents and grandchildren valuing different things (Makiwane, 2010a). The difference in values between grandparents and grandchildren and the changing family structure could result in young people being at an increased risk of engaging in risky sexual practices. Caution must be taken to avoid such situations from happening.

Socio-economic status has been identified as an important determinant of risky sexual behaviour. Studies have identified a correlation between socio-economic status and coerced early sexual debut. Hallman (2005) reported that individuals belonging to low wealth households are more likely to experience early and coerced sexual debut. In addition, Heise, Moore and Toubia (2005) identified a relationship between coerced sex and unplanned childbearing where coerced sex can be understood as a determinant of unplanned childbearing. The context in which coerced sexual debut occurs is characterized by poverty, violence and gender inequality. Harrison, Cleland and Frohlich (2008) suggest that gender inequality and male dominance during sexual encounters makes it difficult for young females to negotiate the use of contraception. They go on to explain that in these settings, the suggestion of the use of contraception represents infidelity which results in females being physically abused, gang-raped and coerced into sexual relations (Okonta, 2007; Harrison, Cleland and Frolich, 2008). Young females remain in these relationships out of fear of being physically assaulted (Manzini, 2001; Eaton, Flisher and Aaro, 2003; Harrison, Cleland and Frohlich, 2008).

Similarly, Heise, Moore and Toubia (2005) report that some females in their study had experienced rape, physical assault, coerced sex and verbal and sexual harassment by older men before the age of 12 (also see Moore et al., 2007). In agreement with this position, Wood and Jewkes (1997) suggest that physical violence has become a norm in South African communities where young females perceive acts of violence as a 'show of love'. Varga (1997) substantiates further by explaining that violence has become a common act in many South African societies as it happens between people who are familiar with each other. According to the framework proposed by Hallman (2006), gender relations directly influences young females' ability to respond to and use information on safe sexual behaviour. The framework suggests that gender inequality within relationships, influences young females' ability to use information on safe sexual behaviour. This has implications on their decision to engage in risky sexual behaviour which influences their odds of experiencing childbearing.

Thurman and colleagues (2006) maintain that early sexual debut can also be understood as a determinant of risky sexual behaviour. Their study revealed that early sexual debut is associated with behaviours of decreased contraception use, transactional sex, an increased number of partners and unplanned childbearing among young people (Thurman et al., 2006). Similar results were found by Maharaj and Munthree (2007) and Moore and colleagues (2007). These studies highlighted that coerced early sexual debut is associated with early childbearing. Transactional sex is also identified as being associated with socio-economic status where young people living in lower wealth households, are more likely to engage in transactional sex (Kaufman and Stavrou, 2004; Hallman, 2005). Eaton and colleagues (2003) support this position and have identified poverty as a reason for the commodification of sex. Furthermore, their study found a correlation between sexual coercion and socio-economic status.

Studies suggest that young people engage in transactional sex for various reasons, some of them being; to meet basic household needs, pay school fees, purchase school uniforms and airtime (see Kaufman and Stavrou, 2004; Thurman et al., 2006; Moore, Biddlecom and Zulu, 2007; Harrison, Cleland and Frohlich, 2008). Transactional sex usually occurs between young females and

financially able older men. This age gap increases the young females' risk of being involved in coerced and violent sexual events. Furthermore, being in a position of dependency reduces the young female's safe sex negotiating power (Harrison, Cleland and Frohlich, 2008). Thus, it is evident that transactional sex can be understood as an important determinant of risky sexual behaviour. Similarly, results from chi-square analysis indicate a statistically significant association between socio-economic status and early childbearing. The analysis found that 43% of the sample who belonged to low wealth households had experienced early childbearing compared to 12% of females who belonged to high wealth households. According to the socio-economic framework (Hallman, 2006), belonging to a poor community impacts young females' livelihood options. As a result, young females engage in transactional sex where their safe-sex negotiating power is limited. This influences their decision to engage in risky sexual behaviour which increases their odds of experiencing early childbearing.

In line with these findings, the bivariate logistic regression analysis identified a statistically significant relationship between all levels of socio-economic status and early childbearing for females aged 15-24 years. The results indicate that young females, who do not live in high wealth households, have higher odds of experiencing early childbearing. Young females living in low wealth households have the highest odds of experiencing early childbearing (6.17) compared to females living in other households. These females were almost six times more likely to experience early childbearing compared to females living in high wealth households. It is interesting to note that females aged 15-24 years, who live in high-middle and low-middle wealth households have similar odds of experiencing early childbearing. These females are five times more likely to experience childbearing compared to females living in high wealth households. When controls were added to the regression analysis, socio-economic status remained a statistically significant predictor of early childbearing for females aged 15-24 years. The odds of experiencing childbearing increased slightly however, the results continue to indicate that females who do not live in high wealth households have higher odds of experiencing childbearing compared to females who live in high wealth households.

This relationship can be understood according to the theoretical framework where socio-economic status, which is at the household level, impacts the livelihood options and access to sexual health resources for young females. Females who belong to low wealth households are likely to have clinics in their area at which community members work. Therefore, access to resources available in these clinics is limited as their visits may not remain confidential. Accessing other clinics may also not be possible because it may be logistically difficult to travel to clinics in other communities. As a result, their ability to access and use these resources influence their decision to engage in risky sexual behaviour. This increases their risk of experiencing early childbearing.

5.3 Recommendations and future research

The identification of socio-economic status as an important determinant of childbearing among young people demands more attention be focused on this area of research. More so, low socio-economic status fosters environments in which transactional sex, gender inequality and violence are prevalent. In these situations, young females' safe sex negotiating power is limited. As a result, these conditions increase the risk of young females experiencing early sexual debut and coerced sex. Therefore, more quantitative research needs to be focused on transactional sex and gender-based inequalities as possible determinants of early childbearing. Quantitative inquiry into transactional sex and gender-based inequality has policy implications if South Africa aims to adopt a proactive stance when addressing adolescent fertility.

This study used risky sexual behaviour as a proxy for early childbearing. However, early childbearing is one of many negative outcomes associated with risky sexual behaviour. More attention needs to be focused on the acquisition of HIV as an outcome of risky sexual behavior. Early sexual debut has resulted in young people becoming one of the most vulnerable groups exposed to the risk of contracting HIV. Therefore, more research should be focused on drawing the link between risky sexual behaviour and the increased risk of HIV contraction. More discussions and interventions are also required to highlight the effects HIV has on the social and economic development of young people and the country. Highlighting the link between risky

sexual behaviour and the contraction of HIV also has implications when promoting the use of a dual method of contraception. This method would provide protection against the acquisition of HIV and decrease the risk of experiencing early childbearing. Similarly, MacPhail and colleagues (2007) suggest that childbearing among young people is a precursor to factors which are associated with HIV contraction later on.

The body of knowledge lacks information which focuses on place of residence. Therefore, more information describing the relationship between place of residence and factors such as early childbearing, service delivery, access to education and the HIV epidemic is required. This is especially important in the South African context where development is noted to occur at different paces within the country. More so, studies focusing on childbearing in South Africa were conducted in the early 2000's. In order to adequately understand and develop interventions aimed at decreasing the adolescent fertility rates, studies need to be conducted using new or current data sets.

The negative effects associated with the lack of adolescent friendly clinics have been discussed earlier in the study. Therefore, the establishment of adolescent-friendly clinics is key in addressing the country's high adolescent fertility rates. These clinics are important as they are aimed at servicing the needs of young people. Health care workers in these clinics need to be trained adequately so that they are able to engage with young people and provide quality and effective care and service. The geographic location and operating times of these clinics should be well suited so that they are easily accessible. More than simply providing resources, these clinics should serve as a support structure for young parents where antenatal and similar classes are provided. In order for South Africa to adopt a proactive stance in decreasing the adolescent fertility rates, interventions need to be developed which address gender inequality. It is important that the culture and needs of the community are understood when developing interventions to ensure their success. Understanding these factors at a grassroots level will ensure that interventions have maximum influence on the target group – young people.

5.4 Conclusion

The aim of this study was to highlight the current levels of childbearing among young people in South Africa. In addition, the study aimed at identifying the socio-demographic and economic factors associated with childbearing among young people. The socio-economic framework proposed by Hallman (2006) was used to inform the understanding and discussion of the results. The study found that a larger percentage of Coloured females experience early childbearing compared to African females aged 15-24 years. The results also show that a higher percentage of females aged 20-24 years have experienced childbearing compared to females aged 15-19 years. Factors such as age and marital status have been identified as socio-demographic determinants of childbearing among young South Africans. Socio-economic status was identified as one of the major socio-economic determinants of childbearing among young South Africans. Young people living in low wealth households were found to be at a greater risk of experiencing early childbearing. These results were found to be in line with the results found in many of the studies reviewed. Similar to other studies, this study indicates that there are a number of determinants associated with childbearing among young people. The size of the effect that these factors have on early childbearing is determined by the context in which it occurs. Issues such as gender inequality, transactional sex and coerced, early sexual debut have been discussed as possible determinants of childbearing among young South Africans. However, the dataset used in this study does not measure these factors and therefore analysis of these factors is limited. Research and interventions focused on these topics will initiate discussions and draw attention to creating a safer environment for the development of young South Africans. The findings of this study have implications for all young people in South Africa as NIDS is a nationally representative dataset. It is recommended that these findings be taken into consideration when developing policy and interventions aimed at curbing national levels of childbearing among young people.

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